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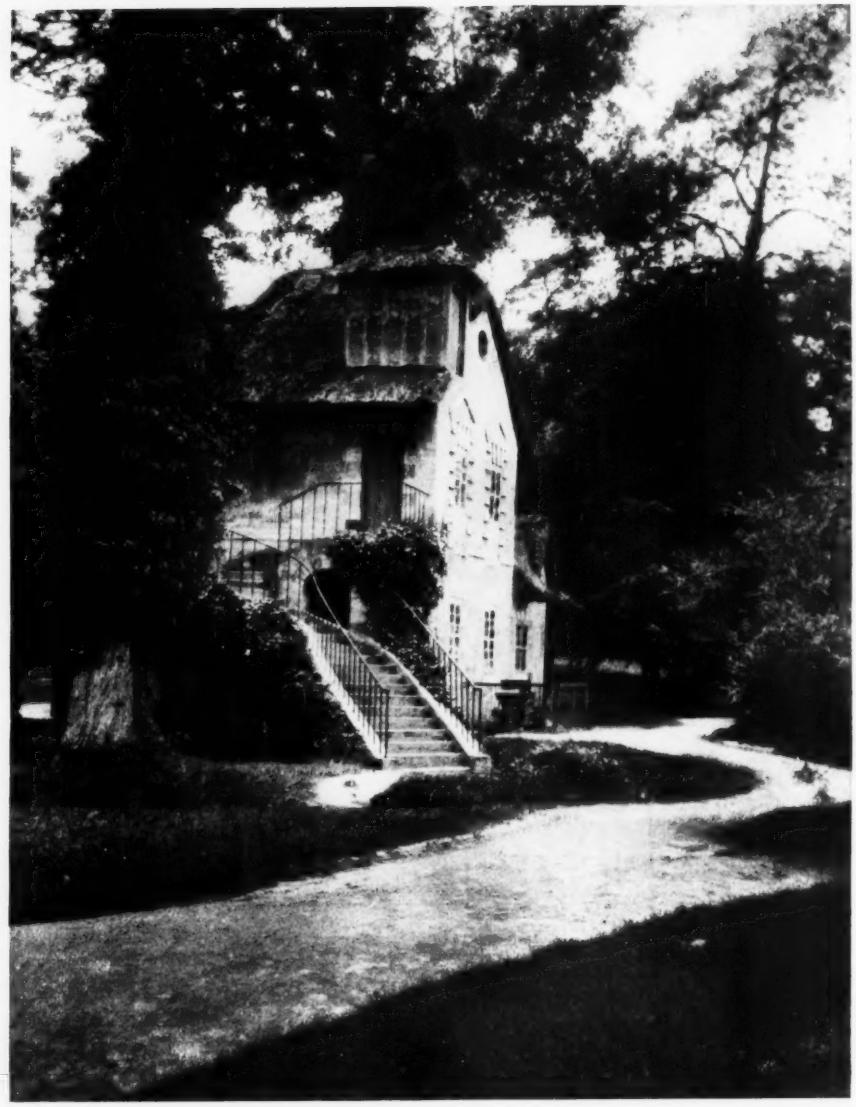

WM. H. PHILLIPS
SOUVENIR — PETIT TRIANON

PHOTO-ERA

The American Journal of Photography

VOL. XVIII FEBRUARY, 1907 NO. 2

PHOTOGRAPHY IN JAMAICA

D. CUTHBERT BUTTER

JAMAICA would not be an up-to-date country if it had not its photographers. There are not many in the island, but such as there are, are a credit to the profession, to the colony and to themselves. It is only necessary to mention such names as Duperly, Cleary, Valdés and Brennan in support of this assertion. Indeed, I go further and say that they not only bear favorable comparison with any in the profession, but are superior to many in the West Indies. This has been proved repeatedly by the highest prizes (gold medals) which have been awarded them in various great expositions. Of course the medals are kept elsewhere, but the certificates accompanying them occupy a conspicuous place among the artistic hangings on the walls of the studios, where all who call may see these certificates. And all these men are natives of the island; that is the gratifying feature of it! And when it is considered that they have not, and probably never will have, the advantages of such eminently helpful agencies as practical demonstrations and lectures to advance their artistic knowledge, but have gained that same knowledge by experiment and study on one hand, and by a little insight obtained in a short trip abroad (chiefly to the United States) on the other, I think it will be admitted that they are richly deserving the highest praise, and merit the honor and distinctions they have won for themselves.

Then, too, there is no one in the island to promote photography, or the photographic art, but the local photographers themselves; and how well they have succeeded without the stimulus of help is seen in the class of work they turn out of their studios daily. Their ambition is to be abreast of the times; in other words, to be up-to-date, which in these days of go-a-headness and keen competition is a very essential requisite. Indeed, whilst competition is said to be the soul of trade, to be up-to-date — i.e., to be in possession of all the latest makes and classes of materials and wares, according to the nature of the business of your choice — is to possess an advantage, the value of which as a factor towards progress, prosperity and success, cannot be too highly estimated. If in Shakespeare's time ambition was a sin, I suppose it must still be the same, since "by that sin fell the angel." But photographers are not angels — certainly the Jamaica photographers are not! — although they may be some day.

They are good men in their way, but still not angels yet. But ambitions differ in character, just as do the men themselves who aim at them. In the case of the photographer, however, the public gets the benefit of his ambition, because, like the true artist, his whole heart and soul are in his work, and his ambition lies both in improving that work (thereby giving better value for the money of his patrons) and in promoting and fostering it as an art.

Looking back thirty years, when I can remember anything properly about photography in Jamaica, there were far fewer houses in existence then than now. There were only two, I think; viz., Duperly Bros. (now A. Duperly & Sons) and E. Bavastro. Even at that period photography was successfully practised, both as a profession and as an art. Much more time was absorbed then in "taking a likeness." The instantaneous process was unknown; the system of lighting was not on such scientific principles as at the present day; while the conditions of the studios, etc., presented by no means a comfortable nor inviting appearance. But that was thirty years ago. What changes have taken place since then! Improvement and progress have been the order of the day. Change has taken place and is observable in almost every department of life and work; and having regard to photography, it is worthy of remark that, although such work is executed on more scientific principles than formerly (thereby imparting to it a greater amount of elegance and artistic finish), the cost is less by fully twenty-five per cent. The materials then in use were of American production, and it speaks well for all concerned — the fine workmanship of the artist and the excellent quality of the manufactures — when it can be stated that portraits taken thirty years ago, which have been cared for in no particular way, are still in fairly good condition. At that time amateur photography was "nowhere," and as to strangers coming to the island with pocket cameras and kodaks, as they do now, such a thing was positively unheard of. Nor is this a matter for surprise. Little or nothing was known of Jamaica, either as a health-resort or a field for investment, save in sugar and rum. But better times were in store — the change was to come. And it came. Like a beautiful nymph of Nature's own modeling, that had been long lying asleep in the cradle of apathy on the quiet waters of Despond, fair Jamaica was destined to rise and shine at the call of Time, arm in arm with Energy and Enterprise. She is now known to the world as never before, and the world — or a part of it — has hailed and embraced her as the object of health and beauty, so much to be desired and so long in the finding.

The visitor to Jamaica cannot fail to be impressed by the glories and beauties of nature, if not with the characteristics of the people who inhabit the beautiful island. Indeed, all who have visited Jamaica have formed none but the most favorable impressions, both as regards its unsurpassed scenery of endless variety and magnificence and as regards the character of the people themselves. Coming for the first time, if he has an artistic eye or is of an artistic turn of mind, the visitor will recognize at once that Jamaica is an ideal spot for the photographer and painter. For so it is beyond doubt; but until recent years, when such

PORT ANTONIO HARBOR — JAMAICA

an impetus has been given to the tourist trade by the establishment of direct communication with England and the increasing patronage bestowed on it by the Americans, the local photographer paid little or no attention to landscape photography, probably because it did not pay, since there was but small demand for photographs of the island's scenery. Conditions are altered now, however, and the photographers are keenly alert.

Until the holding of the Jamaica International Exposition, in 1891, Jamaica was little known to the outside world, and still less were her photographers known. That enterprise, however, while it had the effect of advertising the island as a whole, was vastly beneficial to the local photographers by introducing their products to foreign visitors and thereby raising the standard of Jamaica photography. That was fifteen years ago — not a long period, but within that time a great deal may be accomplished, and a great deal has, in truth, been accomplished. To-day it is safe to say that in few places is photography or the photographic art better represented than in the studios of Kingston, Jamaica. Thirty or forty years ago this perhaps could not have been said; but even in the most progressive cities of the world there were not then those improved appliances which have raised the standard of photography to the place it now occupies. What three or four decades ago did not seem possible — because we

had no knowledge, or if we had the knowledge then, we did not understand how or in what way to apply it intelligently — is now not only quite possible, but has become an accomplished fact. The powerful forces of thought have prompted experiment; experiment has shown the way to possibility; possibility has resolved itself into reality; and the hard logic of fact and experience, as resulting from these, has imparted that comprehensiveness, wisdom and understanding that nothing else could produce, and which are so absolutely necessary to enable us to achieve eventually the object to which we aspire.

Passing on: whether it is from closer proximity of Jamaica to the United States than to England, or whether it is that photographic materials produced in the great Republic are of a superior quality to those produced in the Mother Country, the fact is evident that, with but a single exception, all the cameras and kodaks in use in Jamaica are of American make. The lenses, however, are all of English manufacture. This is a somewhat peculiar condition, and if we are to draw an inference from it, then it can only be said that the manufacturers of lenses in America have not turned their attention to the market here, or have overlooked it for some reason or other. Every one in this line of business, which is evidently a profitable one, is his own importer, if we except the amateurs; and even they, I believe, do not get all their supplies locally. The Rochester goods are the most popular, and one or two of the "artists" keep a good supply of photographic materials in stock. Such houses as the M. A. Seed Dry-Plate Co., Anthony & Scovill Co., Eastman Kodak Co., the Rochester Optical Co., Chas. Cooper & Co., the Century Company, and Hardcastle & Hardcastle are all represented in the several studios, although, strange to say, no two photographers use a camera of one and the same make. Why this should be so I am unable to say and have never troubled to inquire, since it makes no difference which make is used, so long as the work turned out is satisfactory to all parties concerned.

Messrs. A. Duperly & Sons use the Scovill & Adams Co. pattern in their studio, situated at 85 King Street. Most of the leading galleries are located along that thoroughfare, one of the principal and busiest in Kingston. This firm of photographers is the oldest in Jamaica, having a standing of over fifty years, with a reputation of which it may justly be proud. Owing to the excellence of the work turned out, it also enjoys a very large amount of public favor — indeed, perhaps the largest of any of the firms in Jamaica. Before proceeding further, it may be remarked that, in Jamaica, photographers (with but one exception) occupy the same premises in which their studios are located, no doubt as much for convenience as for economy. The houses are two-storied, commodious, cool and comfortable. In some cases practically the whole of the lower floor and some portion of the upper are given up to the business. This is very nearly the case with the Duperlys. After ascending a flight of broad steps of concrete masonry the visitor finds himself on a spacious balcony, from which he passes into the reception-room. This is a good-sized apartment, but plainly equipped and cannot compare with the finely-furnished private drawing-room

above. There are simply a few steam-bent and wicker chairs about the room, with show-cases standing here and there, containing specimens of the artist's work; while on the walls are hung, in massive gilt frames, portraits of every description and pose. A glance around is sufficient to determine the fact that Messrs. Duperly understand their work perfectly, and perform it in that fine, masterly style that has not only made them popular, but has gained for them much honor and distinction at expositions at home and abroad. They are gold medalists. Long, practical experience has made them thoroughly acquainted with the details of their work, and they understand to a nicety all the accessories of their art. The toilet-room, like the reception-room, is also plainly furnished, nothing being shown on the walls; but there is an air of homeliness about the studio, which, added to the genial presence of the proprietor, makes the visitor feel at his ease. This apartment (as are also the posing, washing and dark rooms) is located in a wing of the upper story, reached by a mahogany staircase. The lighting is done by means of a pale green stained-glass roofing and sides, the whole being washed in a hue slightly paler. The color produced is exquisite, resembling that of soft emerald, and the effect is very beautiful; while on the opposite side stands a movable screen painted to represent a storm-cloud with a rift in it, showing a silver lining. This screen is used in taking bust portraits, the Duperlys giving special attention to enlargements in life size. They also develop and print for amateurs and tourists, and make kodak-work a specialty.

At No. 93 King Street is the Valdés Studio, which has been in existence for nearly thirty years. Mr. J. B. Valdés, the former proprietor, died a few years ago in Cuba (his native land), after a long residence in Jamaica. He was a born artist, and brought to bear in his work that rare taste, skill and ability that made him extremely popular with the public and highly esteemed by the profession. He excelled in portrait-work, and was the recipient of several diplomas awarded him in expositions. The business is now carried on by his eldest son, a bright, genial youth of nineteen, who has inherited his father's love and enthusiasm for photography. His work is of a high order, and the public shows its appreciation by the liberal patronage extended to the house. The reception, washing and dark rooms are on the first floor, the toilet and posing rooms, together with a smaller dark-room, are on the upper floor. A feature in connection with this studio is the serving of refreshments (cakes, ices, etc.) to patrons at a small cost. No other studio has gone in for this idea as yet; but it may eventually be generally adopted. The reception-room is utilized for this purpose, and is tastefully laid out with steam-bent chairs and marble-top tables, the windows and doors being draped with white lace curtains. Potted plants are in the windows and on the veranda. A carpet is laid through the centre of the room, and there is a profusion of fragrant flowers in stands and vases. On the walls, in handsome frames, are indisputable evidences of the ability of the photographer. The system of lighting is the same as that previously described.

Mr. J. W. Cleary's studio is at 89 King Street. He has had upwards of a quarter of a century's experience in his profession, and is one of the best pho-

BOG WALK BRIDGE — JAMAICA
RIO COBRE IRRIGATION CANAL — JAMAICA

tographers in Jamaica. It is a pleasure to look over his work. There is here that nameless "something" which claims and holds the admiration of the visitor. Mr. Cleary's work is certainly of a high class, and his *clientele* extends to the military and naval people of the station. Splendid examples of such subjects adorn the walls of his reception-room. He makes group and wedding photography, as well as enlargements, special features of his gallery. Infant photography with him is also a high art, sympathetically approached. The reception-room itself, while not elaborate, is furnished in a tasteful and inviting manner. It is on the first floor, and is certainly the best and most comfortably equipped of any in Kingston. In the centre is a large Brussels carpet, on which stands a Japanese bamboo table with papers and books. At one end of the room is a sofa, while rattan chairs and rockers are scattered about the apartment. Revolving stands and easels, containing examples of Mr. Cleary's work, impart an additional air of beauty to this reception-parlor. The workrooms are in a separate building adjoining, and here again the lighting is done as in the studios previously visited.

Mr. J. W. Chas. Brennan is also a master of the camera, and without doubt one of the ablest exponents of photography in Jamaica. He has had only ten years' experience, however, in taking photographs. Previously, he served for thirteen years in the drafting-office of the Public Works Department in Jamaica, and also in the Imperial Office. He has been described as "the Prince of Jamaica Photographers," and while he may not be undeserving of so high a compliment, he thinks only of his work and of pleasing his numerous patrons, who include the best class of society. He excels in landscape photography quite as much as he does in portrait-work; and, although he does not deal in kodaks, he makes kodak-work one of the features of his studio. His reception-room is not large, but it is neatly laid out, with easy-chairs, couches, etc., the walls being relieved by some interesting bits of his work. On the left is the toilet-room, while on the opposite hand are the posing and dark-rooms. The other operating-departments are on the lower floor. The "Imperial" camera and Ross lens are used in this studio, the lighting of which, to quote Mr. Brennan, "is done on scientific and artistic principles, after years of study." The roofing is of glass, as usual; spring screens or curtains, about six feet in length and eighteen inches wide, cover the whole of the inner surface, while at the side, where glass is also used, stands a good-sized screen on the floor, constructed of separate pieces of cloth, run on horizontal wires. These can be shifted to any position to increase or diminish the light. The result of this arrangement of the light is clearly apparent in the artistic treasures which adorn the walls of the studio. Every picture is indicative of good workmanship and an understanding of the principles of lighting. This house secured the highest award this year for Jamaica photography at the Colonial and Indian Exposition at the Crystal Palace, London. Mr. Brennan is a very genial fellow, his frank, debonnair face and open manner inviting the confidence of his visitors. He is also a man of some culture. "We make this studio the rendez-vous for American tourists,"

he said to me the other day — an invitation that will, no doubt, be accepted by many visitors this season.

In Mr. Ewart E. Cox, whose studio is at 81 Harbor Street, Jamaica has a most promising young professional. He studied at the Polytechnic, Regent Street, London, and uses a Ross camera and lens; he is the exception referred to previously as having an English camera in use. Mr. Cox, who is still a young man, has had only a few months of practical work in Jamaica; but what he has done betrays considerable ability and taste.

The "Jamaica Camera Exchange," the Whitney Studio, is across the street from Mr. Cox's gallery. The proprietor, Dr. C. N. Whitney, is an American by birth, but has for a number of years been a resident in the island. It is not for me to question why he has abandoned the practice of medicine for that of photography; but possibly he has developed a better taste for the latter, as many others have done before him. He is certainly in the front rank of Jamaica photographers. He uses the Century camera, manufactured in Rochester, with Taylor, Taylor & Hobson's lens, of Leicester and London. In addition to his studio, he keeps photographic supplies in stock from the Eastman Kodak Co., this being the only supply-store in Kingston.

I have hitherto written of the professional photographers; there are also a good many amateurs in the island, but, with the exception of two, their work is little known to me. These amateurs reside chiefly in the country towns, where they practise with more or less success. The two with whom I am acquainted accomplish very creditable work indeed. [Most of the studios described in this article were seriously damaged, but are in process of reconstruction.—EDITORS.]

PHOTOGRAPHY IN ADVERTISING

FREDERICK FELIX

(Prize Winner — Literary Competition)

NOTHING is more valuable in an advertisement than an illustration. High-class work is, of course, most effective, yet a poor engraving is usually preferable to none as a means of attracting attention and extending an idea at first glance. The wonderful growth of illustrating advertisements is apparent to everybody, and is in itself the best proof of its effective value.

Almost every one will concede the full value of illustrations if appropriate and well selected. Almost everything depends upon the quality of the illustration for its effectiveness, hence to produce the best effect is the thing to be desired. Photography stands ready to meet every demand in the way of giving adequate expression to practically every idea that is to be conveyed. The rather recent perfection of half-tone photo-engraving solves all the difficulties of illustration. Formerly everything in the way of a printed picture had to be drawn by the engraving artist, either from a sketch or from a photograph. The re-

H. RAVELL
A CHURCH TOWER IN MEXICO

sults in many instances showed marvelous skill, but modern photo-engraving work surpasses the effort in nearly every instance. The photo-engraving reproduces the object as it is, and no human skill can improve upon some of the perfect reproductions for accuracy and truthfulness. Previously, the individuality of the workman had to be taken into consideration, and the engraving reflected his degree of ability. Now the half-tone photo-engraving puts in printed form exactly what is seen in nature or on the photographic plate.

The improvements in the photo-engraving processes have been many, and the end is not yet. At one time the effect was lacking unless the photographic copy, from which the photographing engraver had to work, was perfection; and even then, as in the case of many mechanical and similar subjects, it was found better to choose the wood-engraving process to best produce the full effect. One of the advances is a method by which a photo-engraving which might otherwise be indistinct in certain shaded portions can be "tooled" and brought out with a clearness which retains all the advantages of the half-tone and adds those of the wood-engraving where needed.

This process of manipulating the copy in advance of making the engraving, and of "tooling" the engraving after it is etched by the photographic method, makes photography preëminently the means to be considered for transferring any likeness or idea into printed form. And just as photography is unexcelled in reproducing the beauty of a piece of magnificent scenery or of the creation of an artist, so it becomes most effective as a means to aid the advertiser in appearing to the best advantage before his reading patrons. Unquestionably the best investment an advertiser may make is for illustrations. Everything is susceptible to illustration — from toothpicks to life insurance, and from doorknobs to automobiles. A column may be taken for description, and it would not be a fraction so effective as an illustration taking up two inches of the same space.

The advertising pages of the modern publication have grown, through the means of photography, to such a point that they interest the average person as much as do the other sections. The photo-engravings have done it. There is a pleasure in looking at a beautiful specimen of photo-engraving, even though the advertisement be entirely out of the line of the person who sees it. It would be entirely possible for a lady to become interested in the appearance and advantages of a dredging-machine by reason of effective illustrated advertising, and that very interest, brought about by the illustration, could operate to the benefit of the advertiser in some way. The lady would hardly be supposed to be in the market for a dredging-machine, yet the favorable impression received by a fine photographic reproduction could be communicated to others, at some time, who might be the ones to prove ultimate patrons of the advertiser. The possibilities along this line are easily discernible.

There is no better method of conveying an idea than by illustration, and it has been so from the beginning of the human race. The hieroglyphics of the prehistoric obelisks show how convincing illustrations have been from the

E. R. JACKSON A YOUNG NAPOLEON

very first. The same reason that made the depiction of people in various styles of action effective when carried out with the rude chisel of the early engraver on stone makes the modern high-class half-tone photo-engraving equally effective. An engraving of any kind gives an idea that may be grasped instantly by young or old, simple or learned, and saves the trouble of going through a lengthy text for the same effect, which even then would, very likely, fall short.

That any kind of an illustration seems to be better than none is proven by the success of the crudities offered by the Sunday papers. The children are supposed to enjoy them exclusively, but when the truth is told it will be found that as many adults reap benefits. But that better classes of illustrating are effective in proportion is shown by the magnificent volumes of the bookmaker's art which are sold by means of the illustrations, and the high-class illustrated magazines, periodicals, etc., which sell principally because of being finely illustrated.

All this is a suggestion to the advertiser to adopt illustrations. And when he decides to adopt them he should surely select the kind that takes a photograph and reproduces it exactly as it is. The ease with which photographs of any kind may now be procured, and the low prices quoted by reliable houses for turning them into attractive, convincing engravings, suitable for any kind of an advertising proposition, should appeal to every one and make photography and advertising practically inseparable.

OZOBROME FOR POTTERY DECORATION

A Record of an Experiment

William Findlay

The September issue of Photo-Era *contained the working-instructions for the Ozobrome Process, with additional comments by E. W. Foxlee; while the November issue contained a lecture on the process by Rev. H. W. Dick, together with additional notes issued by the Ozotype Company after their first instructions had been published. Full information regarding the necessary materials for working the process were also given. We feel confident that the present article, by Mr. Findlay, will suggest many possibilities for decorative work.*—Editors.

WHEN one has devoted a large amount of time, money and patience in an endeavor to master the intricacies of a certain photographic process, it is not a little galling to be confronted with the fact that a method of securing the same end in a simpler, safer and more expeditious manner has been put upon the market. I refer, of course, to the carbon process, and to Mr. Manley's Ozobrome process, which readers of these pages have had put before them, and which has caused quite a flutter in the dovecotes of photographic circles.

The carbon process was considered *the* perfect photographic process in which the most artistic results were to be secured, and although the Ozobrome process may be rightly considered a distinct method in itself, there are those who say that it is simply a modification of the older form. The guaranty of permanence attached to carbon work can also be given to that produced by its lusty offspring.

Personally, after reading of the Ozobrome process, I was inclined to question its alleged miraculous powers. Having tried it, I unhesitatingly withdraw the first adjective. My first experiment was to try its applicability to lantern-slide work, and the results exceeded all expectations. Then I tried to get a carbon copy off a bromide enlargement. In this, success — after one ignoble failure — was also gained. I then thought of its adaptation to decorating pottery. Here some difficulties had to be overcome, but after a few failures and the exercise of a little perseverance they were successfully surmounted. The recital of these difficulties, and the methods of overcoming them, may be of interest to readers of this article, and, should they care to follow in my footsteps, they may shun the pitfalls where I have left a danger-post.

I saw in a china-shop, one day, a plate with a beautiful blue border. My companion remarked that one of my photographs in blue carbon, placed in the centre, might enhance its beauty. The suggestion was dismissed as impracticable. However, when doing some lantern-slides by the Ozobrome process the thought came into my mind, "Could not this picture, with equal facility, be transferred to the plate?" I could not get the thought from my mind except by one method, and that was a practical experiment. One of the ordinary household plates was requisitioned for the purpose. A gaslight print was taken

J. H. FIELD

THE RIVER

J. ELIOT DAVISON THE OLD APPLE-TREE

from a negative, a circle mask, such as is used in lantern-slide work, being placed between the glass and the paper. It is well to leave a good margin of white around the circle. This performs the part of the "safe-edge," which is as necessary for Ozobrome as for carbon. This was developed, fixed and washed. When the hypo had been eliminated the Ozobrome pigmenting-solution was mixed in the necessary proportions and placed in a dish. A piece of pigment plaster — marine blue was the color chosen — the same size as the paper was cut and immersed in the solution till quite limp. It was then taken from the bath, placed face upwards on a piece of plate-glass. The print was lifted from the washing-water and placed on top of this, face downwards of course, and gently squeegeed into contact. The two together were then placed between sheets of damp blotting-paper and a sufficient time allowed for the print to trans-

H. RAVELL AN OLD MILL

fer itself to the pigment — half an hour is about sufficient. (Some workers omit this and simply lay the print and pigment on a table and allow them to gain a certain dryness. This is all very well if they do not get too dry, for then there is a difficulty in separating them.) When it is thought that sufficient time has been allowed for the miracle to work, both are plunged into water and under it they are separated. It will be found that the print is almost non-existent, but it can be redeveloped with metol-quinol, amidol, rodinal or any other developer used for gaslight prints. Fixing is not necessary, but a good washing is. The print can then be used for the same purpose again.

The pigment plaster was then squeegeed onto the centre of the plate, a piece of dry blotting-paper was placed on top, above that a lantern-slide cover-glass, and above that again as much weight as it was possible to put on. The

"weight" I used was an enamelled basin full of water. Under this pressure the plate with the adhering pigment was left for twenty minutes to allow of proper adhesion. At the expiration of this time the weight and other paraphernalia were removed, luke-warm water was poured into the plate, and developments awaited with keen interest. No oozing of the color from the side of the backing-paper taking place within a reasonable period, slightly warmer water was used, and the desired effect took place at once. The backing-paper was then removed with ease, and the unaffected pigment came away beautifully. The picture was there all right, but as the dish was rocked to and fro to facilitate development the affected pigment began to peel off, and the experiment was a failure. Another was tried, and a longer time under pressure was allowed, but a similar result was to be chronicled. When the pigment plaster stuck nicely to glass without any substratum it was curious that it should not do the same to stoneware. A close examination, however, revealed the fact that there were inequalities in the surface, and this accounted for the failure.

It was quite evident, therefore, that a substratum was necessary, and the centre of the plate was coated with negative varnish, and when it was considered dry — about an hour afterwards — another trial was made. Failure was again in store, though the peeling off was not so pronounced. Another plate was coated with the varnish, and left for a night to harden. The same procedure recorded was gone through, and a beautiful picture resulted. The safe-edge, represented by the white margin around the pink, showed plainly, and it was necessary to get rid of this. A wet cloth was wrapped around the forefinger, and the circle was carefully gone round with the nail. The varnish came away quite easily at first, but as it began to dry it became more difficult. The finger with the cloth adhering was dipped in methylated spirit, and with that the remaining safe-edge came away quite easily.

A solution of alum was then placed in the plate, and left for half an hour. This acted as a fixing and hardening bath, and eliminated any traces of bichromate, which is one of the constituents of the pigmenting-solution. The plate was then placed on a shelf in a warm room, and in an hour or two was quite dry.

The proceedings were now complete, but there remained the possibility of injury to the picture when the plate was dusted — washing this particular part would be fatal to its beauty. This was overcome by applying picture-varnish to the print. When applied, a rather streaky appearance presented itself, but in the drying-process this vanished.

It is quite possible that if one could secure an unglazed plate the substratum of negative varnish could be dispensed with; but as to the pigment withstanding the heat necessary in the future glazing-process, I am not in a position at present to say.

For purely decorative purposes, however, what I have haltingly related is well worthy of a trial by readers of these pages, and I can assure them that much enjoyment in carrying out the work is in store for them; and that their efforts will be a pleasure to look upon both by themselves and their friends.

A word, in conclusion, as to the choice of colors. A sea-green pigment makes an excellent medium for representing a landscape; it can also be used for seascapes. Red chalk gives as correct a rendering of a sunset as is possible. But what I consider the best color, and in which most of the experiments here recorded have been made, is marine blue. The pigment seems to have more depth than any others I have tried. Seascapes, which on the print looked commonplace, have, in this color, taken on a new beauty, and in snow scenes one can almost imagine he sees the sparkle of the snow, the substratum of negative varnish giving this effect.

WATER DEVELOPMENT

ANTHONY J. PRESTON

EVERY amateur photographer with any ambition aspires to portraiture very soon after learning to use a camera. Now portraiture is a stumbling-block and a rock of offence. Even the professional photographer, with a well-appointed studio, in which he can arrange the light as best suits each individual subject, and where he is most familiar with every part of the apparatus connected with his particular branch of the photographic art, is often hard put to it to produce a really satisfactory portrait. The amateur has in most cases to make the best of whatever surroundings he happens to be in; sometimes his "studio" is a back yard, sometimes a badly illuminated room or an open glade in a wood, and, in any case, his camera is not particularly adapted for portrait work, and his lens does not, as a rule, give that softness so essential to good work of this class.

Seeing that this is the case, the amateur's difficulties are far more numerous than the professional photographer's, and any advice or hint tending to overcome any difficult point becomes very acceptable.

Regarding what may be called the preliminary arrangements, such as arranging the costumes of the sitters and the composition of the picture generally, I will say nothing. This is a matter I will leave to more able pens. There is a difficulty, however, which occurs afterwards, and which causes a great deal of trouble to the photographer and disappointment to his model, and upon this difficulty I should like to give a hint to my brother camerists. Now the greater number of our sitters are ladies — at least, it is ladies who want to see a print; one rarely bothers to print from negatives for our male friends. Furthermore, ladies have a habit of decking themselves in wonderful arrangements called blouses and with yards of filmy material which I am under the impression is called chiffon. These decorations are usually white, and although they appear so enchanting to the eye, are none the less a source of worry to the camera-man.

Who has not photographed a charming little thing in muslin, with a mass of intricate detail in her white dress, only to find on printing that all the detail has

THOMAS A. MORGAN SUNLIGHT AND SHADOW

been lost, and the model to all intents and purposes arrayed in pieces of white paper? This state of affairs is brought about by two always closely associated operations, exposure and development, and it is regarding these two operations that I want to give a few simple instructions. If the photographer will read them carefully and carry them out with patience, I am confident that he will find no further difficulty in the rendering of detail in white dresses.

Well now, having posed your model satisfactorily, the next thing to do is to focus up. Personally, I focus with a fairly small stop — say, f/22 — disregarding for the particular business in hand the usual directions about always focusing with the lens at open aperture. When the image is sharp open the lens to full aperture. The small aperture enables one to get easily all the fine detail sharp, and the subsequent enlarging of the diaphragm tones down the image just sufficient to make the resulting negative soft, and to preserve the contour of the face and limbs.

The exposure should be rather long, say half a second on a fast plate in a good, diffused light when outdoors, or from two to three seconds indoors, according to the amount of light available. The next step is, of course, development, and this requires extreme care.

Take the ordinary two-solution developer, say pyro-soda or metol-quinol, and dilute with its own volume of water; now add half as much of the No. 2 (accelerating) solution as was originally used, and a few drops of ten per cent

potass. bromide solution. Commence development, and watch carefully; the exposure being so long, the image soon makes its appearance and as soon as the whole of it is visible take the plate out of the developer and immerse it in a dish of clean cold water; cover the dish with a piece of cardboard, and rock. In a few minutes the plate may be examined, and it will be found that development is going on very gradually and without clogging any detail. Cover the dish again, and continue to rock patiently until the image is of sufficient density; then rinse in water and fix.

Occasionally it may be found that although all the detail is out the negative refuses to attain the requisite printing-density. When this happens, pour the water away and flood over for a minute or two with the developer. This will soon bring up the density, but it is a course not to be adopted except as a last resource. As a general rule, quite enough density will be obtained without a second application of the developer.

This process of development, of course, takes considerably longer than the usual method, but the quality of the negative is ample recompense for the extra trouble, and, what is of equal importance, the sitter will be pleased with the print. Not only is the detail of the costume preserved, but the whole negative is a great improvement on the ordinary run of portrait negatives. The eyes and hair, for instance, will be far better rendered.

I have used this process exclusively for portraits for some years, and I can strongly recommend it to all those photographers who aim at a pictorial portrait.

The plate best suited for the purpose of portraiture by this method is one having a speed of about 200 H. and D., and should preferably be backed. Orthochromatic plates are not usually an advantage, except in cases where the sitter has a freckled face or auburn hair, when they will be found most useful. — *The Amateur Photographer, London.*

NOTES ON FLASHLIGHT PORTRAITURE

F. J. MORTIMER, F. R. P. S.

IT is assumed that a general knowledge of photography is present. The photographer before attempting flashlight work for the first time should at least know how to focus, correctly expose and develop a plate. Also, no mistaken idea should exist as to the powers of the flashlight to do more than daylight would under similar circumstances.

To start at the beginning, therefore, a general rule to be observed is that, apart from the actinic value of the light used, the most successful and pleasing effects are always obtained if the conditions, as regards the direction of the light, are made similar to those followed in daylight portraiture. Ninety per cent of flashlight negatives are of portrait or figure subjects. Eighty of these ninety can usually be recognized immediately as flashlight productions, and their characteristics are not in their favor. They appear harshly lit, with crude shad-

ows and hard cut-out outlines. Why is this? Simply because the methods of lighting that would have been employed had daylight been the illuminant have been ignored when flashlight has been the source of illumination.

Were it possible to focus the subject on the ground-glass, illuminated by the actual flashlight, these errors of lighting would not occur. Experience, therefore, will be the chief guide for the flashlight photographer, and a method of trial and error his most practical instructor.

The light may take the form of either a flash-lamp or a flashlight mixture — ignited by the application of a spark or flame.

Magnesium is usually the base of most descriptions of flashlight. Magnesium wire or ribbon is of very little use for the purpose, as it burns but slowly and its illuminating-powers are restricted. In the form of powder or dust, magnesium burns very rapidly when brought into contact with a flame, and gives an intense white light. It can be made to burn even more rapidly and completely if intimately mixed with some chemical substance rich in oxygen, such as chlorate of potash; but as these mixtures really constitute explosives, they should be treated differently from plain magnesium powder, and *never* used in a flash-lamp.

The best form of flash-lamp for general purposes is that known as the "blow-through." A reservoir contains a supply of pure magnesium powder. A sufficient quantity of this powder to make the flash is blown through a flame. The flame is formed by burning cotton wick or other suitable substance soaked in methylated spirit, and is attached to the orifice through which the magnesium is blown. Pressure on a pneumatic ball attached by a tube to the reservoir serves to blow a charge of the powder into the flame to make the necessary flash. With some lamps an accumulator for the air, similar to that on the familiar scent spray, is used to drive a continuous stream of magnesium into the flame and so produce a prolonged light. The application of a lighted taper to a flashlight mixture causes a brilliant and instantaneous flash, but to ensure the best result the mixture should be spread on a train of guncotton. Guncotton or pyroxylin is sold by most photographic dealers and chemists, and is quite safe to handle under ordinary conditions. Its use is advocated as not only ensuring a more complete combustion of the flash mixture, but also because the best results are obtained when the light is spread over a broad area. The flash is also more rapid. Plain magnesium may also be fired with a lighted match if spread on guncotton, but the flash is not so quick or so brilliant as with the mixture.

This extension of the flash is a point that cannot be too strongly urged if the best lighting is desired. For this reason two flashlights placed in the proper positions for correct lighting and fired simultaneously give finer results than one light only. Experience will soon teach that a single light of small area, no matter how brilliant, will give harsh shadows and pictures, lacking the desirable roundness and gradation. Therefore, the employment of one main flash and a smaller one at a distance of a yard or two is advised, in order to get more detail in the shadows and add roundness and "modeling" to the portrait. To a

H. RAVELL

VIGA CANAL

certain extent the same result can be obtained with less trouble with a single broad flash by employing a long train of guncotton on which is spread a layer of the flash-powder.

The position of the light is always a difficult question, but it may be taken as a general rule that an angle of 45° should be followed as regards height and distance from the sitter, while the position of the light in front or behind depends on the type of portrait required. An imaginary square should be drawn thus: the head of the sitter S should occupy a bottom corner. The best average lighting will be obtained by the light being placed anywhere on the diagonal drawn from the head to the opposite corner. It should be borne in mind, however, that the nearer the light is to the sitter the harsher the shadows will be, while the further off it is — provided the quantity of powder is increased proportionately — the greater the possibilities will be for diffusing it.

The colors of walls and decorations in a room, also the color of the dress of the sitter, have a bearing on the quantity of flash-powder necessary, and it is advisable to double the powder in case dark colors prevail. Before fixing on the position of the light when making a flashlight portrait it is a good plan to use a portable light, such as a good oil-lamp, and study the sitter under different conditions of lighting. All other lights should be turned down in the room, and the effect produced on the sitter when viewed from the standpoint of the lens by placing the lamp at different points will be approximately the same as that produced by the flashlight. A little higher or lower will make a great dea, of difference with some portraits. In case of deep-set eyes or hollow cheeksl

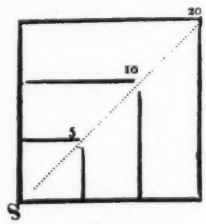

Fig. 1

do not place the light too high; but in taking a group it is desirable to have the light as high as possible, so that any shadows cast by one person will not fall on the next. In any case, the position of the light should be such that the effect will resemble as closely as possible the lighting from a studio skylight, and the little diagram given above indicates roughly what this angle should be.

The relative positions of sitter, flashlight and camera are indicated in the following diagrams. Fig. 2 shows a good arrangement for the production of a pleasingly lit portrait: 1 is the camera; 2, the sitter; 3, the background, if one is used (placed about four feet behind the sitter); 4, the flashlight (eight feet

above the floor if possible); 5, a small screen placed to prevent direct light entering the lens from lamp; 6, a reflector to lighten the shadow side of face, *e.g.*, a piece of white card or paper, or a sheet thrown over a clotheshorse or other convenient holder. If flash-powder is used, a tin tray or lid of biscuit-box forms a good receptacle, and the guncotton train should be spread from side to side. A high pair of steps will answer as a support for the tray, and if a little of the guncotton protrudes over the edge this can be ignited with a lighted taper when

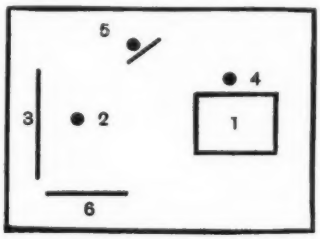

Fig. 2

all is ready. Care should be taken, however, not to put the flashlight too near the ceiling. The sitter, after being posed — in any case, *not* looking at the light (a pleasing effect is obtained by looking at the reflector (6) and allowing the direct light to fall on back of head) — is focused by the aid of a lighted taper or candle held by the sitter near his face, which can then be seen distinctly on the focusing-screen. Use the largest possible stop giving reasonable definition — say f/8. Let off the flash — the lens remaining uncapped during the entire operation of inserting the dark slide and pulling out shutter — and with from ten to twenty grains of flashlight-mixture or a firm, quick pressure on the bulb of the blow-through lamp, a good portrait should be obtained.

The exact amount of flash-powder necessary for producing perfect results depends upon four conditions: the speed of lens; the color of the object photographed and the surroundings; the speed of plate; and the distance of the light from sitter. The following will be found a guide when a rapid plate, say 200 Watkins, is used, the lens working at f/8, the sitter wearing moderately light clothes, and the walls of the room not being very dark. At a distance of five feet from the head of the sitter use twelve grains of flashlight-mixture; at a distance of ten feet use thirty grains; at fifteen feet use seventy grains; and at twenty feet use one hundred grains. It is advisable under all circumstances to employ rapid plates for flashlight work; in fact, the more rapid they are the better, if soft results are desired. They should be backed to avoid any chance of halation from white collars or drapery, etc., and orthochromatic plates possess advantages if the subject has a pronounced color, or freckles, although the use of a color-screen is rather out of the question for the average worker of flashlight portraiture.

The question of smoke is always to be considered, and no flash-lamp or flashlight-mixture has yet been made which, if used unconfined, does not create a great amount. This is a nuisance, and a serious drawback if a second or third attempt is desired soon after the first, as it is impossible to get a clear picture through the haze. Windows and doors should therefore be promptly opened after the flash and a draught encouraged, to clear the air quickly.

A method of trapping the smoke is to be recommended if much work is done, and some such device as the following can be employed: a large tin biscuit-box is obtained and the lid removed. The box is used on its side with the open end pointed at the sitter. A small metal tray is suspended from the roof of the inside of the box, and upon the tray is placed the charge of guncotton and magnesium, or flash-powder. A sheet of glass should be made to slide in front of the box; or if the middle of the lid is cut away, leaving only the rim, this can be used to hold the glass. A small flap door should be made at the back, opening outwards to allow the expulsion of air after the flash has occurred. The powder is fired by means of a lighted taper inserted through a small hole in the side of the box. Immediately after the flash the flap door should be tightly closed, the box removed to the open air, and the smoke allowed to escape.

It is desirable to use two flashlights whenever possible. The accompanying diagram will show the relative position of the two lights to give a good result. Here 1 is the camera; 2, the sitter; 3, background; 4, the subsidiary light — which may be placed on top of the camera; 5, the main light, say eight or ten feet high, fairly near the sitter and screened from the lens; and 6, a reflector.

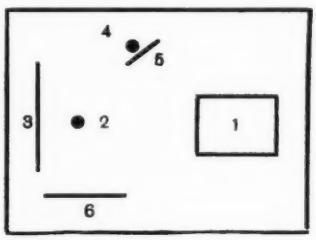

Fig. 3

When the flashlight is placed on or near the camera, see that the apparatus is well covered with a paper or cloth — *not* the focusing-cloth — or magnesium dust will settle and cause trouble.

To secure the so-called Rembrandt effect of lighting, the following arrangement is necessary, and a profile portrait will give the most pleasing result. Here 1 is the camera, 2 the sitter, 3 the background, and 4 the light — placed about four feet to the left, about one foot behind, and about three feet above the head of the subject. No reflector is necessary for this style of lighting, but a piece of cheesecloth stretched on a light frame can be used in front of the light to diffuse

it, and, indeed, can be used with advantage with all other forms of flashlight portraiture.

Care should always be taken that the flash is not reflected into the lens. The best way to obviate any chance of this happening is to fix to the lens a funnel-shaped hood or cone painted dead black inside.

Reflections from pictures or mirrors should also be watched for, as foggy negatives frequently arise from this cause.

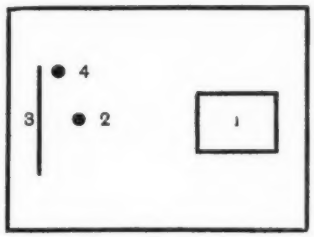

Fig. 4

For focusing, and during the actual exposure, keep all the lights in the room full on, taking care that none is included in the picture; the lens-cap or shutter is therefore not required at all. When focusing a group, or a room, or machinery, etc., a number of lighted tapers or night lights should be placed to mark the boundaries of the subject; and also, if they are placed at other points as well, they are useful for obtaining sharp focus. These latter must, of course, be removed before putting the plate in the camera and exposing.

A tripod camera with focusing-adjustments is far more likely to give satisfactory results than the box-form fixed-focus variety. The better the quality of the lens and the larger the aperture it works at satisfactorily the more chance the flashlight will have of giving a fully-exposed picture.

The development of flashlight negatives calls for much the same attention that hand-camera snap-shots require. A developer readily giving an image free from hardness is to be recommended, and a well-diluted pyro-metol formula, as follows, has given good results in my hands. Use equal parts of each.

A

Pyro	50 grains
Metol	50 "
Metabisulphite of potash	120 "
Bromide of potash	20 "
Water	40 ounces

B

Carbonate of soda	4 ounces
Water	40 "

—*The Practical Photographer, No 20.*

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REVERY
PRIZE WINNER, SPECIAL PORTRAIT COMPETITION

MARS AND RECENT RESEARCHES

JOHN RITCHIE, JR.

[*Concluded*]

NO better exposition of Mr. Lowell's work on Mars can be made than the presentation of a brief review of the lectures given by him this winter in the courses of the Lowell Institute. The series, it may be said, was an assembling of the facts that are known about Mars, which lead up to the belief that Mars is inhabited by intelligent beings. Further than this Mr. Lowell did not go. He made no attempt to imagine what they might be like, but contented himself with the setting forth of evidence that intelligence does exist on our neighboring planet.

The line of argument was first on the scarcity of water, next on the collection of snows at the poles as being the only supply, then on the climate, showing that life would not be impossible. Then there was a consideration of the topography, showing that the construction of waterways is not impossible, by reason of great differences of level. Then, finally, there was a consideration of the phenomena of the canals, connecting them with an intelligent purpose of the Martians to make the snow of the poles, melted by the summer sun, the source available for water all over the surface of the planet. The line of this argument is interesting to thinking men, so it is here given in some detail.

"Separated from our earth by the soundless ocean of space," said Mr. Lowell in broaching the subject of Mars, "there circles like it about the sun another body formed by the same forces and differing from the world upon which we live primarily in size. Being neighbor to us in the original meteoric plenum, it offers all the assurance of having been initially formed of like material." This point of common origin in material was the basis of the argument, and upon it depends our assumption of the story of Mars from what we have been able to observe of the behaviour of like materials upon our own earth. In the same way the observation of Mars is to an extent prophetic, since from observations of it we may to an extent predict what will be the fate of the earth in ages to come.

Mars has a diameter about one-half that of the earth, a mass or weight of about one-ninth, and gravity at its surface is about .38 of gravity here. The day is forty-one minutes longer than ours, the year is twice as long, and the inclination of the axis to the plane of the ecliptic, not very different from our own. The latter of these facts shows that Mars, so far as seasonal change is concerned, is favorable to life. The seasons are twice as long as ours, and this length is rather important in view of an amount of heat from the sun that is less than what we receive.

Observers of Mars have remarked various changes in tint on its disk. The poles assume a white color consistent with snow and not accounted for by the freezing of any other substance known to us. Then, at the proper time with reference to the sun, the ice-cap disappears, melts, apparently, and a blue edge

THEODORE EITEL THE FLUTE-PLAYER

is seen, which it is assumed is the water produced by the liquefying of the polar ice and snow. If the cap is ice this blue line must be water.

At first certain of the markings were given the name "sea," but circumstantial evidence comes to show that there are no large bodies of water on Mars, that Mars is an oceanless world. One of the fundamental observations tending to this belief is that the permanent markings of the surface, the straight lines or canals, extend across the "seas," and if the latter were water such permanence of markings would be impossible.

Another of the important lines of argument is that the blue-green areas are vegetation and that the changes of tint that have been observed are due to seasonal changes, quite similar to those which we experience on this earth.

Still another line of argument is that Mars is mountainless. The flatness of its surface is notable, and this is a character perfectly well to be determined, since evidences of considerable mountain ranges could not fail to have been noted. One curious feature which has been observed are certain little irregularities along the edge of the planet. These prove to be not mountains, as was at first surmised, but in all probability clouds of dust, so that phenomena similar to the great sand-storms of the Sahara are really visible to us. It is not possible to follow out all the lines of proof, but this one is rather popular: the

close and continual observation of these spots has shown that they become detached from the disk of the planet as it revolves, and on the edge one can see between the planet and the dust-cloud. The observation gives a key to the condition of much of the surface of Mars. The ochre regions are deserts, and Mars is a vast Saharan world, where fertile spots are the exception and where water is everywhere scarce. It is a saddening picture of a world in destitution, a world athirst, where water is the one thing needful, yet where only from the melting of the polar snows is any of it obtainable.

An important matter, in which a comparison of the conditions on Mars stands forth in its relations to that of the earth, was a consideration of the origin of the two bodies. Assuming them to have each been the segregation of particles, whether of gas or solid meteorites, the process of condensation into spheres has squeezed heat out of them. Clearly the heat so produced would be relative to the masses of the two bodies, since the squeezing influence is gravity. This idea is a departure of course from the old one of a hot nebula out of which the planets were made by the throwing off of rings. But the hot nebular hypothesis is by many not longer held to be tenable. For a cold nebular hypothesis, or a meteoric one of any one of the varieties, Mr. Lowell's suggestion is a sequence, according to which each planet evolves heat in contracting to an amount relative to its size. Mars, therefore, smaller than the earth, did not have sufficient force of gravity to produce as high a temperature as the earth, and being smaller it radiated what heat it had much earlier. It did not have so large a stock of heat to begin with, and it spent it faster in the second place, so that Mars passed long ago through the stage where the earth now is, and the development due to our present temperate climate was long ago accomplished. Mars, therefore, is relatively older than the earth.

The lectures of Mr. Lowell then went on to note the loss of oceans on Mars, the water which it possessed being absorbed into crevices in the surface and lost into space. This is prophetic so far as the earth is concerned, since there are on every hand evidences of the growing aridity of our land and the encroachment of our continents upon the sea bottoms. In this matter the earth must follow Mars, and the sea bottoms share the fortunes of the continents in the loss of moisture; they will outlast them, nothing more.

"Before the final stage in the long life drama of a planet is brought to its close there will be a time when the water still lingers a little in the air." Of this there is some evidence in Mars. As the season advances during which the polar cap melts, there comes an indefiniteness to what were before contours that were sharp. That this is mist due to the melting of the cap there can be little doubt. That the moisture-laden winds will tend to the poles is but a reasonable assumption based on laws of rotation, and the moisture is here condensed into snow. Within this snow-cap lies most of the water of Mars. At best, it is but a scanty supply, and it is tethered at that; for it is tied up for most of the time at one pole or the other. For a few weeks only at each half-year it stands unlocked, first in the Arctic region and then in the Antarctic. Then, and then

only, may this meagre deposit be drawn upon. Mars is indebted for the staff of life to a polar pittance sparsely doled out, and only at the appointed times.

The very important question whether the temperature of Mars will permit of life was the subject of an entire lecture, and of a paper or two which have since been given by Mr. Lowell. The old idea that Mars is a very cold planet was based upon certain suppositions which Mr. Lowell shows to be wrong. In his computations he has depended to a considerable extent on the work of Professor Frank Very. Professor Very, who was the co-worker with Langley in those experiments on heat that gave Langley his international reputation, has continued the work himself, and it is of high character and importance. The general outline of Mr. Lowell's arguments along this line is that it is possible to get the surface temperature of Mars from a consideration of its brightness. The quality of its surface as a reflector of light may be computed, assuming it to be of the same materials as the earth. The whole quantity of heat that it receives from the sun may be computed; and since its brightness represents the energy that is turned back or reflected, the balance must be retained. The outcome of a series of complicated computations establishes the fact that the average surface temperature of Mars may be not widely different from that of the earth. It is true that the seasons are much more unequal, there being cold winters and hot summers, but it is also true that it is the summer temperature that is the essential condition to life. So far as temperature is concerned, Mars is not impossible to life.

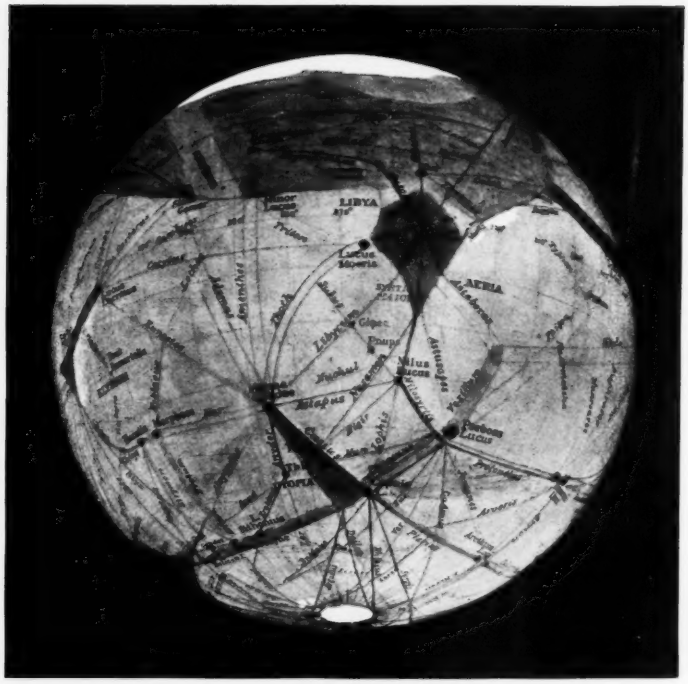
A bit of evidence was introduced at this point to show that animals can live in air that at first sight seems too rarified to support them. Recent observations which have been made in the San Francisco mountains opposite Flagstaff show that the creatures of the surface, deer, bears, etc., live almost at the tops of the mountains, where the atmosphere is only half as dense as at sea-level, and are as active and energetic as their brothers in lower places. This is done without any special adaptation of their organs. If this can be done without special mechanism, how much more cannot nature do by adaptations evolved at her leisure towards fitting life to the environment of a scanty atmosphere?

Next in order in Mr. Lowell's massing of facts came the novel idea of the domination of brain over nature in a well-developed planet. A step up was made when life came from the water to the land. Brain was needed, and brain was evolved. Greater possibilities were evoked when man came upon the scene. Then fire and clothing raised him above the brutes, and slowly he began to take possession of the earth, and later to subjugate it. He has steadily been at work turning nature to his own ends. Thus far, though dominant, he has hardly begun to leave his mark upon the earth. His towns and his tillages are hardly more than tentative. But the time is coming when the earth will bear his imprint. What he chooses will survive, what he does not wish to preserve will lapse, and the earth itself will become the carved object of his handiwork.

From the condition of Mars it is reasonable to look for a high development of brain in its inhabitants. On the one hand, it is relatively older than the earth;

HELEN P. GATCH

THE TRUANT

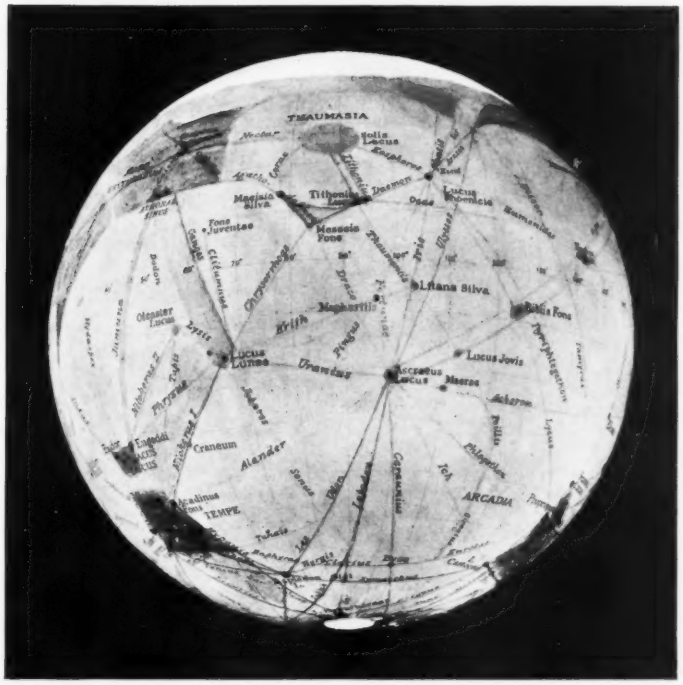


THE SYRTIS MAJOR REGION, OR THE HOUR-GLASS SEA

on the other, the land forms of life, which are the more highly developed, should in general differentiation have far outstripped the earth's.

Up to this point, the argument has been of a nature based upon physical conditions as observed, which shows that life is possible on the planet and they have suggested what kind of evidences one might expect would be observable at our distance; viz., works which have to any extent modified the planet as a whole. The way is now clear for the presentation of such evidences as the observations of intelligent work afford.

The remaining lectures in the course were devoted to the non-natural or artificial features of the planet. For a better understanding of these the illustrations are here given. They show the canals and the oases and other features. The canals are the long single or double lines; the oases, the round spots at the intersections of the lines. These, it should be understood, are maps of Mars, and not photographs of the surface. It is not claimed that any one has seen at any time all the markings that are shown. They have all been closely observed, however, each at the best time for seeing it, and a portion of them have been verified by means of the camera. It should further be understood that it is



THE SOLIS LACUS REGION, OR THE EYE OF MARS

not claimed that the canals that are seen are water. They represent lines that on the surface of the planet may be from, say, five miles to thirty in width, and are supposed to be irrigated areas and not canals of water.

The argument which is based on them is the argument of design. How otherwise than by the work of intelligence could such markings have been made? Their evenness stamps them to be non-natural, for nature never works with this kind of regularity. They cannot be cracks, they cannot be mountain-chains, they cannot be any of the natural markings of which we have any knowledge; for if they were they would be more irregular.

The markings which are called "canals" present a number of peculiarities. There are about four hundred which have thus far been observed. They are arcs of a great circle on Mars, most of them appearing as straight lines. They have length up to 3,450 miles, most of them, however, being only 200 or 300 miles long. They are subject to great differences in visibility, being easily seen at some times and difficult or impossible at others. They are scattered all over the surface of the planet, and are fairly equally divided, reaching even into the polar ice-cap. A most curious feature is that of the doubling of the canals. It

happens that a canal which has been seen for some time as a single line develops at once a duplicate parallel line. This phenomenon has also been photographed, so that there can be no doubt that it is not a matter in which the human eye has been deceived. The gathering of this information has been peculiarly the work of the observatory at Flagstaff, and nowhere else can data at all comparable be secured whereon to found any hypothesis of origin.

Mr. Lowell's treatment of his facts has been in an interesting and conclusive way. By graphic curves he has been able to express various matters with reference to the canals, such as their distribution in different zones, their variations in visibility, and the like. The variation in visibility, he shows, is a regular progressive movement from the pole towards the equator, and which he claims is a seasonal one. In this connection vegetation irrigated by the water of ditches is the explanation which he suggests as the only rational one. The water liberated by the melting of the polar snows is conserved, and is led by canals to places where it may be used for the production of vegetation. The change he shows is one that comes at the proper time with reference to the season. From the polar region the increase in visibility, or the wave of vegetation, creeps latitudinally down the disk of the planet. Such a phenomenon as the spring awakening of the greenery of the earth is of similar character, yet different in its order. With us the vegetation follows the sun's warming influence, but on Mars it is delayed until such time as the sun has passed to the north or south so that it may warm up the polar regions and melt the snows, and then its action begins. With dozens of little bits of evidence, Mr. Lowell made most probable the conclusions towards which his arguments tended, each bit strengthening the chain he was forging. And no feature seems the stronger than this one of the slow march of the seasonal growth down the latitudes, the reverse of its normal progression under earthly conditions. The conclusion is a striking one, the fastening of design to the canals of Mars, and it is one that to many of his auditors seemed but the proper outcome of an extraordinary massing of evidence.

That the world will accept immediately the conclusion that Mars is peopled with intelligent inhabitants is not to be expected. Such beliefs grow rather slowly. The tendency of our religions, the prevailing man-central conception of the universe, the inertia of scientific men, all stand in the way of the immediate acceptance of it. Of his large audiences there were some who disbelieved from beginning to end. Some questioned the facts set forth; others, the methods of reasoning. This was to be expected. But, on the other hand, there were many "who came to scoff," but who remained to pray. Many good thinkers were brought to a knowledge of Mr. Lowell's facts and an acceptance of the conclusions which he has drawn from them. It has been a splendid setting-forth of a remarkable investigation, to which Mr. Lowell has devoted himself, his time, and his resources. It is distinctly a work reflecting the highest credit on American science.

EDITORIAL DEPARTMENT

JAMAICA

THE latest scene of a catastrophe due to seismic disturbances is the beautiful island of Jamaica. Although for many years a popular winter-resort, it has never attracted so many American tourists as during the past few seasons. The travel thither, especially from American ports, has been very heavy, and the disaster which has overtaken this garden-spot of the West Indies is but a brief, temporary check to its prosperity. Fortunately, the work of destruction has not been so serious as at first reported, and it is safe to state that the topography of the island has not undergone any appreciable change, the beautiful scenery, for which Jamaica is noted, remaining unimpaired. In spite of the partial destruction of the town of Kingston and the consequent suffering to the population, communication between the numerous ports of Jamaica and the outer world received but a slight, temporary interruption. As a result of the events of the past month Jamaica has become more prominent in the public eye than ever before, and, as is usual in such instances of terrestrial disturbances, travel to various parts of the island will increase rather than diminish. We rejoice, therefore, in being able to present to our readers in this issue of the PHOTO-ERA an attractive and trustworthy article describing, by pen and picture, something of the character of the fairest island among the Greater Antilles.

THE NATIONAL ACADEMY OF PHOTOGRAPHY

IT is to be regretted that the idea of forming a National Academy of Photography in this country is no nearer solution than it was several months ago; Thus artists who profess to be opposed to this idea are at heart in favor of it, for they are known to have expressed a wish for the existence of a Supreme Court of Appeal, in which the highest ideals in the photographic profession shall centre. We are glad that the editor of *Wilson's Magazine* is deeply interested in this scheme, but it appears that as yet he does not know the peculiar traits of the American photographer. He states that the "Continental Camera Coterie," at its meeting in Buffalo last October, voted unanimously against the proposed Academy; i.e., on the lines which have been proposed. Whether he means along ideas expressed at the Buffalo Convention last summer, or whether he has in mind our own idea on the subject, it does not really matter. What if this exclusive little body did express its idea on the subject? It is to be supposed that this same coterie of photographic friends would sit on the same project along any lines whatever. It may be a shrewd, diplomatic beginning, from which ultimately will result the Academy. Does not the far-seeing politician decline the profferred nomination? When the conditions are right he accepts. Absolutely and permanently refuse? Not he. If the editor of *Wilson's Magazine* knew the American photographer as we do, if he had observed the doings at the National Conven-

tions as we have, he would not be in a position to misinterpret the little play of a negative vote as regards the formation of a National Academy of Photography. We cannot recall one of these annual meetings of the professional photographers during the last thirty-five years at which there has not been discussed some movement for the betterment of the American photographer, yet with no practical result, so far as we know. For a year preceding an annual convention the craft would agitate a subject for the improvement of photographic conditions. This would be promptly brought up before the Convention, discussed at length and followed by the adoption of formidable resolutions. Committees were appointed to lay the matter before Congress, and much was hoped from the work of these gentlemen. But, as we remember, nothing was done. Among these measures were many of undoubted importance, which certainly would have benefited the craft; but for lack of intelligent and united effort they vanished in thin air. As regards the meeting alluded to by our esteemed cotemporary — and he may have occasion to record many more of a similar character — it is to be regretted that he does not appear to be able to read between the lines. Perhaps he does, as we do; but, like ourselves, refuses to commit himself. We certainly shall not abandon hope as regards the Academy. We were the first among American photographic journals to broach the subject, and we certainly shall not relinquish the idea, for we are convinced that it is for the benefit of the American artist-photographer. As we have already intimated, these preliminary meetings, at which the subject of an Academy is discussed, are beneficial, even when the idea is repudiated, inasmuch as they help to agitate the question; and there is nothing like good, sound agitation. We are not prepared to state, and, in fact, no one knows, just how the idea will take shape. We do not fear that this great question will meet the fate of other noble projects in past years. The right men will be found — few in number, to be sure — who will be able to obtain the victory now ardently wished for. In the meantime our interest in the matter will suffer no abatement, and we may depend upon our esteemed cotemporary, the editor of *Wilson's Magazine*, to assist in keeping the matter before the photographic public of this country.

OUR LITERARY PRIZE CONTEST

WHEN we first announced this contest, last summer, we had a suspicion that the number of subjects was excessive, and the results warrant that belief. Of course it was impossible to foretell the success of certain topics, although we were reasonably sure that each of the eight subjects would elicit a number of contributions. It was natural not to expect a uniformity of excellence of the competing articles. Most of them failed utterly to meet the requirements imposed; still, the results were in the main satisfactory, as five of the eight classes were accorded prizes. The following is a list of the successful contestants: Fred Felix, for "The Value of Photography to Advertising;" C. H. Claudy, for "Touring with an Automobile;" Madison Phillips, for "The Shape of the Photographic Print;" F. A. Fairbanks, for "Some Historic Landmarks of National Interest;" and Elmer C. Smith, for "The Application of Photography

to Book-Illustration." The first one of this list is printed in the present issue of the PHOTO-ERA, and each succeeding issue will contain one of the remaining subjects, until the list is exhausted.

OUR SPECIAL PORTRAIT COMPETITION

AS we announced in the January issue of the PHOTO-ERA, the successful competitor in this contest is the firm of Brock & Koonce, the well-known firm of portraitists of Asheville, N. C. We take pleasure in presenting to our readers a half-tone reproduction of the winning portrait. The artistic and technical excellences of this charming figure will doubtless appeal to our friends. Workers who confine themselves to lenses of small aperture for portrait-work will be interested to know that this exquisite specimen of photography could never have been produced with a lens of the ordinary rectilinear type. The picture possesses qualities of atmosphere that are imparted by the lens, and which characterize this particular form of portrait-objective — No. 7 Euryscope, fourth series. This instrument has an aperture of four and one half inches and a focal length of thirty-two inches. It is, therefore, not suitable for use in connection with the camera used by the ordinary amateur. Thus it will be seen that the professional worker has a decisive and material advantage over the amateur, inasmuch as his operations are conducted on a large scale, and in this way he frequently obtains great results with comparative ease. In the hands of an artist such as Mr. Brock — and there is a limited number in this country who belong to the same class — a large lens of the portrait-type is capable of producing work of a high character, such as some of our notable amateurs should strive for. Their excuse for adhering to the use of lenses of a discarded and inadequate type and of flat-working single lenses is that the portrait-objective of the professional is not bulky or heavy, but too costly.

HERZOG'S DECORATIVE COMPOSITIONS

AMONG the several interesting lines of pictorial photography which have of late engaged the attention of photographers and painters alike is the work of Benedict Herzog. Workers in this country and abroad are doubtless familiar with his charming, decorative panels, which consist of gracefully-draped female figures, skilfully and tastefully arranged, generally to conform to some allegorical design. We have watched, with pleasure, the progress of Mr. Herzog's original and pleasing form of artistic expression, and can readily understand the enthusiasm with which it has been received by art-lovers in general. His most ambitious plates, entitled "The Banks of Lethe" and "'Twixt the Cup and the Lip," which embellish Alfred Stieglitz's beautiful quarterly magazine, *Camera Work*, have created a sensation in the art world. We shall be interested to know how these new decorative groups, or panel compositions, will have impressed that strangely philosophic thinker, George Bernard Shaw, who, as is well known, has already surrendered to the æsthetic influence of photography as expressed by the pictures of another American practitioner.

THE ROUND ROBIN GUILD

Conducted by Elizabeth Flint Wade. Specially designed for the amateur photographer and the beginner. Membership may be obtained by sending name and address to the PHOTO-ERA.

" . . . . Came cold February, sitting
In an old wagon — for he could not ride —
Drawn of two fishes, for the season fitting,
Which through the flood before did softly slide
And swim away: yet had he by his side
His plough and harness fit to till the ground,
And tools to prune the trees, before the pride
Of hasting Prime did make them bourgeon round."

Thus sang old Edmund Spenser, of our short and seemingly lifeless month, February. But well he knew that February was the month of all the year when one has respite from completed toils and must not only look forward to, but prepare for, the spring and summer which is hastening on apace. Must he not "prune the trees, before the pride of hasting Prime" should bring forth the buds and blossoms, when it would be too late to use the pruning-hook? And must he not prepare the ground and make ready for the seed-sowing?

February is of all months the month in which not only to pick up the dropped stitches of the past, but to plan for the coming workaday months. So let all our Guild use the month of February to make ready for the lusty days of spring, and the restful days of summer, which travel on apace, revealing each day new possibilities for advancement in his favorite avocation, photography.

Dickens says that "there are shades in all good pictures; but there are lights, too, if we choose to contemplate them."

Now in the average amateur photograph, instead of choosing to contemplate the lights, we are obliged to contemplate them, for they thrust themselves upon the eye, challenging it to observe them. More often than not the high-lights are so obtrusive that the shadows are lost entirely, and impress the eye as dark masses only, without special form. It is not the high-lights that make a picture; it is the skilful manipulation of the shadows, which, blending and melting into each other, lead gradually up to the lights of the picture.

There is not a point in the making of a photograph which requires as careful consideration as the harmonious management of its lights and shadows. The art of artistically and judiciously distributing the lights and shadows in a picture is expressed in the word "chiaroscuro." When we say of a photograph that it is hard and cold looking, we simply say in other words that it lacks chiaroscuro. It does not mean the disposing of the lights and shadows apart from each other, but that it is the art of representing light in shadow and shadow in light, so that the parts represented in shadow shall have the detail, the warmth, and the clearness of those in the light, while those parts in the light shall have the softness and roundness of those in the shadow.

If one wishes an object-lesson in the managing of lights and shadows, let him make a landscape picture at high noon, and another of the same subject either in the early morning or in the late afternoon. In the picture taken at noonday the shadows will appear as black patches with little or no detail, the high-lights will be harsh and chalky looking, and the effect will be a most unpleasant picture as far as any artistic merit is concerned. The picture taken in the early morning or late

afternoon will show the objects in shadow with as much clearness of detail as those in the light, and the gradation of tones from the deepest shadows to the strongest light will be harmonious throughout the picture.

With this thought in mind of proper "chiaroscuro," the amateur would do well to look over his landscape pictures and see how many have detail and clearness in the shadows and softness and roundness in the high-lights. Many of them doubtless will be found to be simply confused masses of black and white, and if one searches for the reason he will doubtless find that most of them were taken near the middle of the day, when the sun was bright and strong.

The very best time of day for making landscape pictures is the early morning, when the sun is just sending its long rays athwart the landscape and the mists are rising from the valleys. This haziness of the atmosphere is a condition which lasts only a short time, but if one has the "early-to-rise" habit it is well worth his while to take advantage of this phase of Nature and so be sure of securing pictures full of artistic beauty.

Orthochromatic or isochromatic plates are strongly recommended for making landscape pictures. The names are derived from the Greek, the first meaning "right color," the second "equal color." The emulsions with which these plates are sensitized are intended to give the "right color," or, in other words, the tone-value of the objects photographed. To illustrate: if one was photographing a scene where there were masses of shrubbery of various shades of green running from the dark of the evergreen to the light colors of the poppy foliage, for instance, an ordinary sensitive plate would render the greens of a uniform tone, while if an ortho- or iso- chromatic plate were used the resulting picture would show the different degrees of light and shade, thus rendering their true tone-values.

The best time of day for taking landscape pictures is either in the early morning or the late afternoon, morning preferred.

The ideal day for landscape pictures is when there are light fleecy clouds in the sky, which soften but do not obscure or deaden the shadows.

Light is strongest at noon and faintest at sunrise or sunset.

The intensity of light is greatest in June and July and least in November and December.

White clouds soften without obscuring the light, while heavy gray clouds deaden it and destroy contrasts.

A partially cloudy day is the best for making waterscapes.

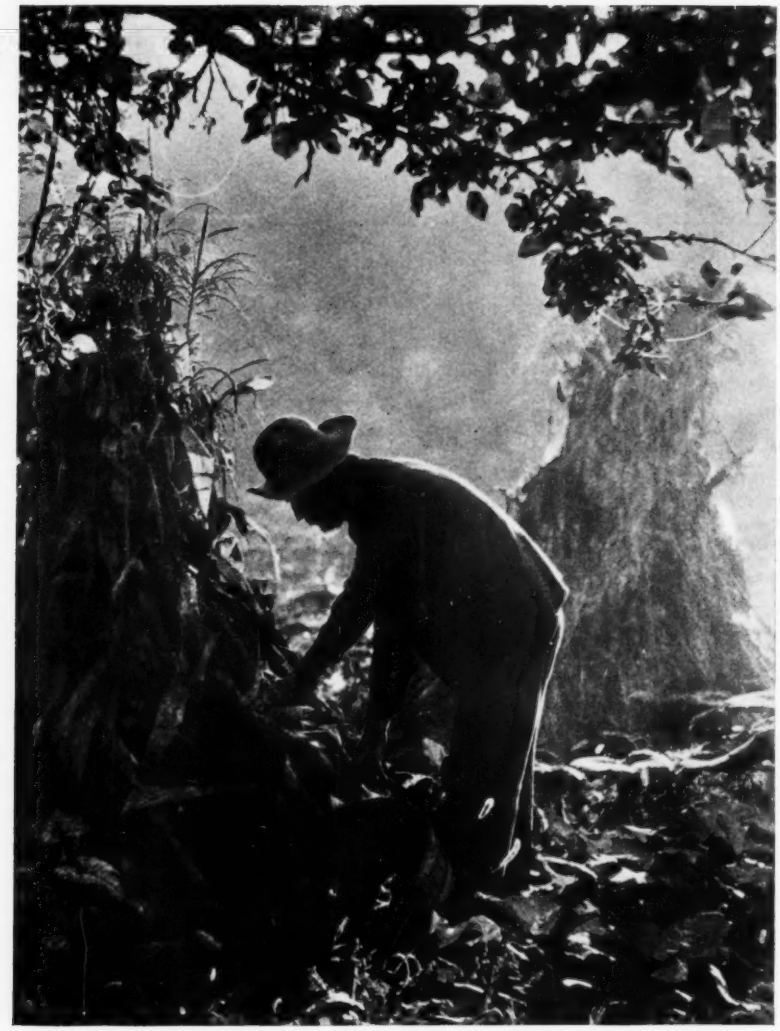
In making any sort of picture it "becomes you to worship shadows."

HER VALENTINE

A very attractive way to frame three or four photographs which make a series is to have a sheet of glass cut half an inch wider and half an inch longer than the prints when they are laid side by side. Cut a piece of stiff cardboard the exact size of the glass, arrange the prints on it and stick them lightly at the corners just to hold them in place. Lay the glass over the prints and bind the edges of board and glass together with lantern-slide binding. Choose a ribbon of a color which will harmonize with the furnishings of the room for which the picture is designed, getting two widths, one an inch in width, the other a half-inch. Of the inch-wide ribbon enough to go around the picture will be required. Turn it at the corners and sew into place. Put a piece of the half-inch ribbon around the glass at the point where two pictures meet, and tie the ends in a small bow at the top. Divide the other pictures in the same way, having the ribbon lie flat on the glass.

Small brass rings are sewed to the ribbon on the back under the bows, and serve for hanging in place of screw eyes.

Pictures mounted in this way make very pretty valentines, and are far more desirable than the usual valentine remembrance. They also lend themselves admirably to wall decoration, and may be hung in small spaces between larger framed pictures with pleasing effect.



J. H. FIELD
FIRST PRIZE

SAMUEL F. FROME SECOND PRIZE

ROUND ROBIN GUILD COMPETITIONS

First prize: Value $10.00,
Second prize: Value $5.00.
Third prize: Value $2.50.

Prizes may be chosen by the winner, and will be awarded in photographic books or magazines published or advertised by us; in enlargements, art portfolios of photogravures, mounts or other photographic materials advertised by us; or, if preferred, we will send any article of a photographic or art nature which can be bought in Boston for the amount of the prize won.

RULES

Membership in the Round Robin Guild, with all its benefits — among which the correspondence privilege probably stands first — is free to all, and we invite every photographer to become a member. Entrance in the monthly competitions is also free to all, whether subscribers to PHOTO-ERA or not.

SUBJECTS FOR COMPETITION

January — "Calendar." (See January issue.) Closes February 28.
February — "Post-cards." Closes March 31.

AWARDS — HARVEST SCENES

First prize: J. H. Field.
Second prize: Samuel F. Frome.
Third prize: C. M. Whitney.

Honorable Mention: M. E. Baumberger, Harriet J. Goodnow, Harry D. Williar, Louis P. Murray, Mrs. H. P. Davis, Jean M. Hutchinson, Mrs. A. F. Turner, John F. Schork, Florence Marie Roberts, A. D. F. Gardner.

BARTON H.— Persulphate of ammonia may be bought in tubes ready for use by adding a certain amount of water. Each tube contains enough of the reducer to use at one time, so there is no trouble of weighing, or guessing at the quantity needed. In developing your negatives carry on development till the shadows have good detail. If the high-lights are too strong then reduce in the persulphate, which reduces the high-lights first before attacking the shadows.

F. G. K.— An ink for writing titles or descriptive matter on the dark or shadowed parts of a photograph is made by taking 2½ oz. of potassium iodide, 6 oz. of water, ¼ oz. of iodine, and ¼ oz. of gum arabic. Dissolve the gum in the water by heat, strain and add the chemicals. Keep tightly corked, and shake the solution well before using.

F. L. TRUE. — A clearing-bath for platinotype paper is made of one ounce of hydrochloric acid (C.P) and sixty ounces of water. For the sepia platinotype it is better to dilute this bath one half. Use several changes of the bath until all yellow tones disappear. Unless the acid is chemically pure — that is, bleached out white — the yellow tinge of the acid will stain the prints, especially if the bath is strong.

G. L. DEANE.— You will find the metacarbol developer an excellent one for under-exposed negatives. A good formula is as follows: metacarbol, 50 grains; sulphite of soda crystals, 200 grains; sodium hydrate, 100 grains; water, 20 ounces. To mix, first dissolve the metacarbol in the water, add the sulphite of soda, and when this is dissolved stir in the sodium hydrate. Let it stand and settle; then filter and bottle for use.

DELIA S. —To clean bottles from stains of chemicals fill the bottle with a solution of washing-soda and let it stand over night. Turn off about half, drop small shot into the bottle, cork and shake well. The stains will come off quickly, leaving the glass clear. If one has not shot convenient, pieces of egg-shell will answer the purpose quite as well as the shot.

CHARLES S. H.— The price of *The Practical Photographer* is twenty-five cents a number. Each number is devoted to some special subject. If there is anything special on which you wish to be informed, write for the number treating of that subject, enclosing twenty-five cents, and the copy will be sent you.

R. O. E.— It is not necessary for you to make up any chemical solution for the purpose of removing the film from old negatives. If they are very old let them lie in warm water for a few hours, then drain off the water and turn boiling water over them. The film will soften and slide off from the glass without any trouble whatever. If the negatives are of recent make turn hot water over them. When the film is removed wash in warm suds, rinse and dry.

FRANCES W.— Clean the plate as directed in answer to R. O. E. Make up a solution of gelatine — thirty grains of gelatine to one ounce of water. Have enough of the solution to admit of immersing both print and glass in the liquid. A porcelain tray will be found most convenient for this purpose. Take the glass in the left hand, the print in the right, and putting both beneath the surface of the liquid adjust the print in place on the glass. Lift out carefully, lay the glass on a flat surface and squeegee the print to the glass, taking care that all air-bells are removed so as to have perfect optical contact. The gelatine solution should be warm when in use.

ELEANOR C.— You will find as good a treatise on platinotype printing as one could wish in the number of *The Practical Photographer* devoted to that subject. It is No. 6 in the series, and will be sent you from this office on receipt of price. This book should be in the hands of every amateur photographer.

ALLEN R.— An article on "Nocturnal Photography" was published some time ago, probably before you became a subscriber to the magazine. In the March number we will give further hints on this fascinating phase of photography. March and April are both specially good months for this sort of work.

THE HANGING AND ARRANGEMENT OF PICTURES

BESIDES being works of art, pictures have an important office to fulfill in the home as decorations for the walls. A room may be perfectly equipped with all the necessary articles of furniture, the floors satisfactorily covered with carpets or rugs, the window light screened or tempered by appropriate hangings and the walls papered in artistic colors and designs, yet not be altogether satisfying. The reason is apparent by a glance at the pictureless walls.

Masterpieces of art, of course, are beyond the reach of the ordinary household; but there can be found at the present time a larger variety of good pictures at a moderate price than ever before.

The hanging of a picture makes or mars its success as a decoration for the room. If the colors are printed or painted in bright tones, the degree of light needed is not so great, in the daytime or evening, as with colors of less intense hue. Dark corners of the room may be perceptibly brightened by the introduction of pictures in vivid colors — pinks, reds and yellows.

Large pictures require distance to appear to their best advantage. This rule applies also to compositions of a certain character — winding roads and curving brooks that seem to disappear beyond the horizon.

Family portraits bear so intimate a relation to the life of the household that they belong in the living-rooms, except when for some reason they fit into the scheme of decoration for the formal rooms, hall or drawing-room.

Portraits of celebrated authors acquire increased interest when placed near their works, and pictures of composers are more attractive when hung near musical instruments. In one library a little gallery of authors' faces was made by filling the entire wall above the book-shelves with prints framed uniformly. The idea might be taken up in a music-room with the same success, using good photographs or engravings of persons eminent in the musical world.

Small pictures distributed at intervals upon a wall lack the style that they give when grouped more closely together. The same principle is true of the small plaster medallions that are usually hung, each by itself, about a room.

Two different methods of hanging pictures with a wire cord can be followed. One is to use one hook for each picture and have the cord form an acute angle where it falls over the hook. The other plan is to use two hooks and two separate cords, the cords making two separate perpendicular lines from picture to hook. The latter way is better for large, heavy pictures, the former more suited to pictures light in weight.

The proper height at which to hang a picture is often questioned. A good general rule is to bring the centre of the picture within eye range of a person of ordinary height when standing before it, but this need not be inflexibly followed. Sometimes three pictures framed alike and similar in composition or coloring are to be hung one above the other. The middle picture, which will look better if a size smaller than the other two, should be the one in eye range, and the space of an inch left between the pictures above and below.

One common mistake of an inexperienced picture-hanger is to bring into juxtaposition pictures with dark and light mats. Harmonious results are impossible to effect when this is done.

In many houses the hallway is quite overlooked in the matter of picture decoration. The opportunity, either in a living or reception hall, is too good to be lost.— *The Delineator.*

CARBON PRINTS ON IVORY

CARBON prints may be very readily transferred on to ivory for decorative purposes. In doing this, it is advisable to give the ivory a substratum coating of gelatine, and the easiest to use is made as follows:

1. Gelatine ..... 60 grains
   Glacial acetic acid ..... 5 drams
   Dissolve in a water bath.
2. Chrome alum..... 15 grains
   Water ..... 5 drams

For use mix —

Methylated spirit .....300 minims.
Water .....120 "
No. 1 solution ..... 12 "

Heat in a water bath, and add with constant stirring —

No. 2 solution .... 6 minims

Filter through linen and flow over ivory and allow to dry.

INTENSIFYING PLATINUM PRINTS

UNDER-PRINTED platinotypes may be readily intensified in the following bath made up in the order given:

Water ..... 4 ounces
Citric acid ..... 80 grains
Hydroquinone ..... 8 "

Add a few drops of a five per cent solution of silver nitrate to enough of the foregoing bath to cover the print. When the desired degree of intensification has been attained, remove the print, wash thoroughly and fix in an ordinary hypo bath as in P. O. P. work. Finally, wash and dry as usual. As the intensification is due to silver, the print may, if desired, be toned by the usual bromide-paper methods.

LANTERN-SLIDES BY THE CARBON PROCESS

WILLIAM FINDLAY, whose article on "Ozobrome for Pottery Decoration" will be found elsewhere in this issue, recently gave an interesting demonstration of carbon slide-making before the Aberdeen Photo-Art Club. Mr. Findlay, whose specialty is seascapes, advocated the use of a three per cent solution of bichromate in summer and a little stronger bath for winter, says *The Amateur Photographer*. After exposure, gauged by a strip of P. O. P. placed on another part of the negative, all of which cannot be used for slide-making, the tissue is placed in a dish of water along with a perfectly clean cover-glass. The tissue is allowed to become quite limp, with curling outwards, and is then brought in contact with the glass under water. Both are lifted out, the tissue squeegeed into contact with the glass, and the embryo slide placed inside a fairly heavy book. It is left there for twenty minutes, and then immersed in water hot enough for the hands to bear. In a little time the color begins to ooze out from the sides. The backing-paper is then lifted at one of the corners with a penknife, seized by the thumb and forefinger, and gently separated. Development then proceeds, no rough treatment being permissible, else the half-tones are lost. Two slides were developed in the presence of the audience. Both were from negatives of about the same density, and both had received the same exposure. The first was in pure black, and, though all detail was present, it was useless as a slide. The next was in Rotary dark blue, and it was a beautiful slide, crisp and full of detail, which later in the evening was shown on the screen and greatly admired. Mr. Findlay said his "failing" was for blue colors, and he had found it the best for marine subjects. He explained the failure of the first slide by the fact that different colors require different exposures. Blue, being more sensitive than black, sea-green, or red chalk, was a color very suitable for sunsets, and only by experience could one gauge the correct exposure. He also stated that a longer exposure was necessary for lantern-slide work than for the ordinary carbon prints. What would make a good carbon print would look very poor when projected by the lantern, owing to lack of depth.

STRIPPING FILMS

OF all the methods advanced for stripping films, none is so satisfactory as that effected by the use of some form of hydrofluoric acid. It is not necessary to have the acid in the form of a liquid, as it may be easily prepared in proper strength according to the following formula:

Water	10 ounces
Sulphuric acid	½ fluid dram
Sodium fluoride	30 grains

It should be remembered that the acid is very corrosive and forms dangerous sores upon contact with the skin. Its fumes should not be inhaled, and as it attacks glass it should be kept and used in gutta-percha or vulcanite containers.

Place the negative in plain water for a few minutes and then immerse in the acid bath, where the film soon becomes detached and floats off, or, if necessary, may be easily separated from the glass with the finger, which should be encased, for protection, with thin india-rubber finger-tips. Rinse in a dish of water, after which it may be floated on to another glass support, reversing it in the process if desirable. If the film is allowed to remain long in the water it will enlarge considerably. The stripped film should immediately be transferred to a bath of methylated spirit before placing it upon a new glass, if no enlargement is desired.

A method which causes no enlargement of the film is as follows:

Soak the negative for about ten minutes in a ten per cent solution of formaline, then rinse and immerse in the following bath:

Water	2 ounces
Methylated spirit	2 "
Glycerine	40 minims
Hydrofluoric acid	80 "

When the film lifts at the corners it may be gently stripped from the glass, as described above, and rinsed before transferring to a glass support.

YELLOW FOG IN NEGATIVES

ALTHOUGH an old trouble, yellow stain resulting from unscientifically prepared developers is loth to depart from the photographic dark-room. Certain developers may easily produce this objectionable coloring as soon as a higher temperature is reached. A glycerine developer used at 59° to 66° yields clear negatives, which feature should be considered with stand-development. Whatever the character of the developer used, it is a good plan to rinse the plate thoroughly after development. The Lumière Brothers recommended the following method for the treatment of yellow fog: soak the afflicted negative well, then place for five minutes in a solution of permanganate of potassium in the proportion of 1 to 1000; rinse thoroughly, then treat the plate to a bath of metabisulphite of potassium 1 to 10, and rinse.

A PORTRAIT SUGGESTION

IN taking portraits never have the eyes turned in the opposite direction to the head. Large eyes should be turned a little downward, small eyes upward, and deep eyes full view to the camera. A little attention paid to the posing of the subject will fully repay the amateur operator.

CLEARING-BATH FOR BROMIDE PRINTS

THE following bath is efficacious in removing fog, veil or stains from bromide prints:

Water	10 ounces
Citric acid	10 "
Thiocarbamide	20 grains
or	
Water	10 ounces
Hypo	2 "
Potass. ferricyanide	30 grains

BOOK REVIEWS

THE ART OF THE DRESDEN GALLERY, by Julia de Wolf Addison. Boston: L. C. Page & Company. First impression; November, 1906. Cloth, $2.00 net.

All lovers of art — including artists, however eminent — should rejoice in the appearance of this delightful volume. In scanning its pages the intelligent reader will quickly observe the loving, yet discriminating hand of the author, who, while telling the story of one of the world's most attractive picture-galleries, practically gives the history of painting, beginning with Botticelli and ending with up-to-date artists of the German school. As every important school of painting is well represented at Dresden, notably the Venetian, German, Dutch and Flemish, it is easy for so capable and versatile a writer as Mrs. Addison to point out the characteristics of nearly every great painter since the time of Mantegna. With becoming modesty Mrs. Addison — herself the possessor of a keen critical faculty — in presenting the merits of a certain painter, quotes the opinions of cotemporaneous writers, recognized authorities in art, so that the reader, if in need of information, is served by a conscientious and trustworthy guide. The story of the matchless Madonna di San Sisto is charmingly told, also simply and truthfully. This admirable trait accompanies the description of each great picture and each notable artist, and makes the perusal of the book not a task, but a joy. What profit one thus derives applies not merely to the gems of the Dresden Gallery, but to the pictures of other art museums, such as Berlin, Munich, Vienna, St. Petersburg, Amsterdam, Paris, London, as well as the great galleries of Italy. We have here, then, practically a universal guide to painting, founded upon the priceless contents of what may safely be regarded as the most popular picture-gallery in Europe.

Dresden has been called the Florence of Germany. With its art-loving princes, its coterie of scholars and artists, its famed crafts, its Noble Academy and Art Gallery, it deserves the title more than any northern capital. No wonder its English quarter constitutes a formidable portion of the city's population. The musical advantages of Saxony's beautiful capital are unsurpassed, the climate is mild and equable, and with matchless opportunities to enjoy the creations of the world's most illustrious painters — not forgetting the wonders of that Aladdin-like museum, the Green Vaults — the person privileged to pass a winter in Dresden may, indeed, taste of earth's joys the greatest.

Mrs. Addison's book has fared well at the hands of the publishers, being superbly printed and provided with a handsome, tasteful binding. The illustrations number a half-hundred of full-page duogravures printed in sepia, the subjects being admirably chosen, covering various schools of art treated by the author. The volume will undoubtedly prove a winner of the first rank, for it appeals irresistibly to picture-lovers, connoisseurs and laymen alike, possessing all the elements of quick and lasting popularity.

PHOTOGRAPHY FOR STUDENTS OF PHYSICS AND CHEMISTRY, by Louis Derr, M. A., S. B. The Macmillan Company, 66 Fifth Avenue, New York, N. Y. 8vo, cloth. $1.40 net.

Although photography, in its purely technical sense, is one of the younger sciences, it has called forth a prodigious number of text-books, and few of these are as concise, lucid and practical as the above-named volume. Mr. Derr is associate professor of physics in the Massachusetts Institute of Technology and has for many years sedulously practised photography along scientific lines, imparting the results of important experiments and investigations to the students in his department. We know from personal knowledge that he is qualified to speak and write with authority on the subject of practical photography, and our perusal of his book simply confirms this opinion. There are many persons who take up photography for a serious purpose, not necessarily as a means of artistic expression, and to such thoughtful workers Professor Derr's handbook is earnestly recommended. The working-principles are explained with admirable clearness, all matter likely to confuse the student being carefully eliminated. A valuable feature of this new handbook is the diagrams, which serve to elucidate some of the more occult phases in photography; viz., astigmatism, halation, color-sensitiveness of the sensitized plate, etc. The chapter on measuring shutter-speeds is strikingly clear and to the point. Professor Derr is to be congratulated on so successfully presenting the salient points of the photographic science. There is no doubt in our minds that the volume will be in active demand, as it should, by all seeking a clearly-expressed and trustworthy manual of the art-science *par excellence*.

THE COMPLETE PHOTOGRAPHER, by R. Child Bayley. New York: McClure, Phillips & Company. London: Methuen & Company. Large 8vo. Price, $3.50.

Among the several text-books on photography are few which originated from a pure love of the art, coupled with an evident desire on the part of the author to benefit his fellow-workers. To this class belongs Mr. Bayley's book, which is, moreover, a work of conspicuous literary merit, and a source of inspiration to workers ambitious to excel in artistic expression. The various chapters are linked together like a logically connected story, in which the author describes the discovery and evolution of the most wonderful of all the arts in a lucid, fluent and delightful manner and with the ardor of a genuine enthusiast. Mr.

Bayley, having the courage of his convictions, frankly proclaims photography as an art, which fact alone will win a host of friends for his excellent book. To support this claim, he has called to his aid pictures by many of the most eminent pictorialists of the day, not omitting examples of two great pioneers in the field of artistic photography — David Octavius Hill and Julia Margaret Cameron. While the book is embellished with over fifty specimens of pictorial photography, all by workers of high rank, it is to be regretted that such masters as Perscheid, Hofmeister, Duehrkoop, Pichier, Mueller, Kuehn and Ruf are not represented. Their names are not even mentioned. To ignore the work of these distinguished artists, which in some respects surpasses even that of the French and English schools of photographic art, shows a spirit of prejudice, of unfairness, and by no means detracts from their worth. Is it creditable to the author of the "Complete Photographer" to utterly disregard Perscheid of Berlin, one of the most original and forceful portraitists in the entire photographic world? As for America, a few bright lights of the Photo-Secession are referred to deferentially; but to Mr. Bayley workers like Garo, MacDonald and Histed do not appear to exist. Why this unjust discrimination? Otherwise we have words of only the highest praise for the volume, which is among the foremost of its class and a notable contribution to photographic literature.

THE BRITISH JOURNAL PHOTOGRAPHIC ALMANAC AND PHOTOGRAPHER'S DAILY COMPANION FOR 1907. Edited by George E. Brown, F. I. C. Publishers: Henry Greenwood & Co., 24 Wellington Street, London, England. Price, 50 cents; postage, 25 cents; cloth, $1.00. 1,624 pages. Sole American Agents: G. Gennert, 24 East Thirteenth Street, New York, N. Y.

Once more we greet this indispensable volume, this time of unprecedented size. Sandwiched in between two inches of solid advertising-matter is the text, one inch thick, and comprising practically the world's progress in photography during the year 1906. As everybody knows the make-up of the *British Journal Almanac*, its many excellences need not be recited, except that it were difficult to suggest a matter of real photographic interest that is not included in its present comprehensive grasp. New inventions, improvements in apparatus and advances in chemical manipulations, printing-processes, color-photography and outdoor operations form the most valuable features of this popular reference-book. Fifty pages constitute a directory of photographic societies in Great Britain and the United States. Formulæ for the principal photographic processes take up fifty pages, while seventy pages are devoted to developing-formulæ, etc., of the leading paper and plate manufacturers. Among the nuggets in the "Miscellaneous Information" is a list of the most important text-books on photography, and papers on the copyright and patent laws. In all the articles only writers of acknowledged standing and authority have been drawn upon, so that, all in all, the *British Journal Almanac* for 1907 is a veritable treasure-trove, and cheap at double the price asked for it.

HOME PORTRAITURE

"HOME PORTRAITURE" is the title of a pamphlet issued by the Bausch and Lomb Optical Company, of Rochester, N. Y., and it points out to the amateur the road to success in this delightful department of photography. There is sound and valuable advice on the subject from an amateur of experience, instead of an expert professional, which feature should appeal to the younger workers. The accompanying illustrations, also by amateurs, should be of material help to the student. Mailed free on application.

FOTO-REVUO

A NOVELTY in the field of photographic periodicals recently made its appearance in the form of a monthly journal, edited by Charles Verax, in Esperanto and French, the same articles appearing in the two languages in parallel columns. The full title is *Foto-Revuo Internacia, monata revuo kun ilustraĵoj.* It is published by Charles Mendel, 118 Rue d'Assas, Paris, France. Subscription price, one dollar per year.

Esperanto is the International Auxiliary Language created by Dr. L. L. Zamenhof, a doctor of medicine, residing at Warsaw, Poland. Its aim is not to displace existing languages, but to be a second language for the world, and its merits are now recognized by the most eminent men of all nationalities. If we consider the enormous advantage of a common language, understood by all, we must confess what a blessing Dr. Zamenhof has conferred upon mankind.

The language is so simple that one who has some acquaintance with French or German can learn it in four weeks, if an hour each day is devoted to study. For this reason progress in the language has advanced by leaps and bounds, until to-day nearly 300,000 persons are conversant with the language. There is practically no country where Esperantists cannot be found, for the rate of growth is constantly increasing and now covers more than thirty different nations of Europe, Asia, Africa, America and Oceanica. Esperanto societies, which are being formed in the large cities of every country, are aiding the work, and, as a result, two hundred and fifty books and pamphlets in Esperanto are in print and ten monthly reviews are published regularly.

The value of such a universal magazine of photography, and the benefits to the photographic art accruing from such a journal as *Foto-Revuo*, are beyond question, nor can they be overestimated, and we heartily wish the editor and publisher all success in their new venture.

Bausch & Lomb-Zeiss TESSAR

HOME PORTRAIT
By C. R. TUCKER, New Dorp, Staten Island, N. Y.

HOME PORTRAITS

are impossible at this season of the year—without a lens of great speed and the highest optical corrections. Such a lens is

TESSAR

Note in the accompanying illustration the naturalness of the pose, and note also, please, the kitten. Have you ever tried to photograph a cat? If you have you know that this photograph was instantaneous. When you can do work like this *in the house*, and also the finest of landscape, architectural and out-of-door instantaneous work, it is worth while to pay a little more for the lens.

Send for beautifully illustrated new booklet "Home Portraiture."

Bausch & Lomb Optical Company

ROCHESTER, N. Y.

NEW YORK *BOSTON* *WASHINGTON* *CHICAGO* *SAN FRANCISCO*

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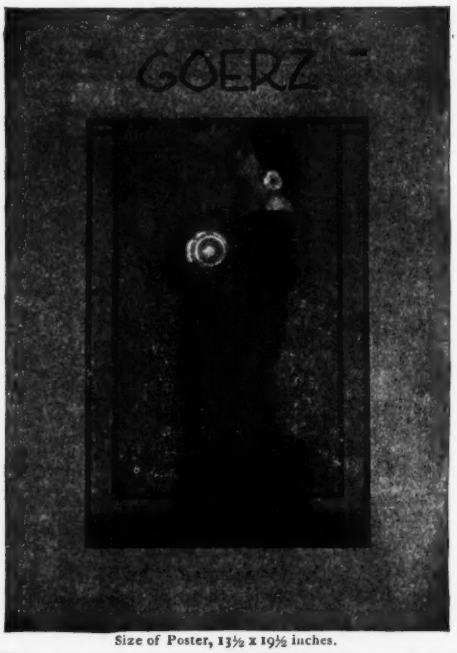


Size of Poster, 13½ x 19½ inches.

Out!

The GOERZ Catalogue for 1907

THIS splendid General Catalogue with its magnificent Prize Cover, a reproduction in two colors and gold, from Ed. I. Steichen's original gum print winner of the Goerz Catalogue Cover Competitions, (1905) will be sent on request against remittance of 9 cents in stamps to cover postage.

¶ The Catalogue gives full particulars on all Lenses, Cameras, Binoculars and other goods manufactured by this Company. It comprises 64 pages of text, profusely illustrated, a collection of valuable lens formulae and short cuts, one beautiful photogravure (a reproduction of one of Radcliffe Dugmore's celebrated animal pictures) and fifteen fine half-tone reproductions "hors texte."

¶ In answer to numerous requests from artists and art lovers, the C. P. Goerz American Optical Co. have decided to publish a limited issue of 250 reproductions from Mr. Steichen's Prize-Winning Catalogue Cover Design. They are in the form of a poster and are reproduced in fac-simile as to size and color directly from the original. They are all printed in two colors and gold, on extra heavy paper and are ready for framing. They will be mailed carefully packed, and registered against order accompanied by remittance, (check on N. Y. or money order.) Price, $1.50 net.

C. P. GOERZ AMERICAN OPTICAL CO.

52 Union Square, NEW YORK, and Heyworth Building, CHICAGO
Pacific Coast Agents, Telgmann & Torka, San Francisco, Cal.

BERLIN PARIS LONDON ST. PETERSBURG VIENNA

THIRD AMERICAN PHOTOGRAPHIC SALON

AN exhibition of 273 prints from 114 contributors, comprising the Third American Photographic Salon, under the Auspices of the American Federation of Photographic Societies, opened in Toledo, January 3, and will later make a tour of the principal cities of the United States. Both the preliminary jury of photographers and the final jury of painters sat in the rooms of the Pen, Pencil and Camera Club, 510 Smithfield Street, Pittsburg, Penn., from November 19 to 22, and passed judgment upon the many hundred prints submitted from photographers in all parts of the world.

The Third Salon compares well with those of previous years, as the collection of prints is a widely representative one, the work of artists in the United States, Canada, England, France, Italy, India and South Africa being included, and seven prints being the highest number accepted from any one contributor. Those achieving this distinction were Guiseppe Castruccio, Genoa, Italy; Miss Sarah Holm, Chicago; W. H. Phillips, East Liverpool, and Miss Ethel Rector, Chicago, who, by the way, is the youngest aspirant for Salon honors, and previous to this year was known to only a small coterie of friends. Miss Rector is not the only newcomer, however, for many of the contributors have been hitherto quite unknown. It is interesting to note the progress of American pictorial work, as evidenced by the fact that most of the prints accepted seem to strike a happy medium between sharp definition and the "fuzzygraph." "Smudges" and "woolly effects" are conspicuous, for the most part, by their absence, and strong, wholesome subjects, breadth of treatment and subordination of unnecessary detail are the rule. Practically every printing-medium known to photography is to be found in the exhibition, and straight photography with but little hand work is dominant. It would seem that Americans have this year excelled their brothers in foreign lands, as all the prints chosen by the final jury for purchase by the Federation are the work of Americans. The prints chosen are as follows: "Decorative Portrait," by Sarah W. Holm, Chicago; "Capitol at Night," by J. H. Tarbell, Washington, D. C.; and "A Maid of the Frontier," by Louis Fleckenstein, of Faribault, Minn.

Among the women represented this year by distinctive contributions are Mrs. G. A. Barton, of Birmingham, England, one of whose prints was purchased by the Federation last year; Adelaide Hanscom, of San Francisco; Sarah W. Holm, of Chicago; and Mrs. Caleb Keene, of Cape Town, South Africa. Fedora E. D. Brown and Mrs. Eleanor W. Willard have both contributed excellent specimens of gum-printing.

Notable prints characterized by strength, vigor and breadth are the offerings of men like Louis Fleckenstein, of Faribault, Minn.; H. Tarbell, of Washington, D. C.; D. H. Brookim, of Chicago; Will D. Brodhun, of Wilkesbarre, Penn.; John Chislett, of Indianapolis; H. W. Minns, of Akron, O.; W. H. Phillips, of East Liverpool, O.; R. E. Weeks, of Chicago; W. H. Zerbe, of Richmond Hill, L. I.; Dwight A. Davis, of Worcester, Mass.; S. L. Gates, of Chicago; Winfield Scott, of Washington, D. C.; John W. Rumsey, of New York City, and many others.

PHOTOGRAPHERS' ASSOCIATION OF PENNSYLVANIA

A FINE list of prizes is offered by the Photographers' Association of Pennsylvania at their Eleventh Annual Convention at Williamsport, Penn. Mr. W. D. Slater, of Philadelphia, offers as a special prize an elaborate silver loving-cup, gold-lined, ten inches high, in a handsome velvet-lined leather case, with burnished metal trimmings and lock. This trophy will be awarded to any member of our Association who shall exhibit the best six portraits printed on American Aristo Platino paper from negatives made since May, 1906. Prints to be not smaller than nine inches one way. Pictures to be framed without glass. R. A. Morrison & Company, of Pittsburg, Penn. also offers $25 in gold for the best three portraits, any size. No name to appear on pictures, and they may be framed or unframed, to suit the exhibitor.

There will also be a Rating Competition, open to all members of the Association. Six pictures, any size. First prize, silver medal; and a bronze medal to all those receiving a rating of sixty-five points out of a possible one hundred. Mr. W. P. Buchanan, manufacturer, importer and exporter of photographic supplies, of Philadelphia, offers two prizes for flashlight pictures made with Luxo. First prize, a gold medal; second prize, a bronze medal. Winning pictures to become his property, and must not be less than seven inches one way. No name to appear on picture.

In addition to these competitions, a Grand Salon will be composed of all pictures in the whole exhibit. Any picture deemed of sufficient merit will receive a blue ribbon. For any further information, address the Secretary, E. E. Seavy, New Castle, Penn.

INTERNATIONAL PHOTOGRAPHIC EXHIBITION

ON Nov. 29, 1906, a meeting was held in the City Hall of Dresden, presided over by Mayor Herr Beutler, Privy Counsellor of Finance, on the subject of a great photographic exhibition, intended to take place in Dresden. Nearly every section of the German Empire was represented, about thirty gentlemen being present. After a long discussion it was unanimously resolved that an International Photographic Exhibition be held, in the Great Exhibition Palace, during the

year 1909 or 1910, intended to comprehend the various branches of the art in contributions of every country, thus affording a study of photography in its development and its actual achievements, apparatus and utensils, of a professional, artistic and scientific description. For this purpose there are to be departments for history, professional and amateur photography, scientific photography, photographic industries, reproduction and literature. A preliminary committee has been charged with the details of the plan. In the beginning of 1907 invitations are to be issued to industrial, professional and amateur photographers of every country.

NECROLOGY

DEATH has recently claimed two men who have contributed much to the development of scientific photography — T. R. Dallmeyer and J. T. Sandell, both Englishmen. The former, son of J. H. Dallmeyer — noted for the manufacture of an improved portrait-lens designed by Petzval — succeeded his father in the optical business. He devoted himself to the development of photographic lenses originated by his firm, especially the telephotographic lens, several perfected types of which he designed and manufactured. Appreciating the great success of the Goerz Double Anastigmat, he at once designed and constructed a similar type — the Stigmatic Lenses. He was also largely responsible for the Dallmeyer-Bergheim Lens. The latter invented the double-coated and the triple-coated dry-plate, an emulsion of the lowest sensitiveness being next the glass, and one of very high sensitiveness being on the surface, thus yielding a plate of extremely high speed, with strong contrasts and complete absence of halation.

PRIZE PORTRAIT

THE prize portrait of our Special Portrait Competition, "Revery," by Brock & Koonce, of Asheville, N. C., which is reproduced elsewhere in these pages, was produced with a No. 7 Euryscope Lens, series four. Size of the original print is 11 x 14, made on Angelo Sepia Platinum Paper. We learn that extra unmounted prints, on heavy sepia platinum paper, will be sent, post-paid, by the publishers, for $2 each.

THE NEW GOERZ CATALOG

COMPETITION is the life of trade. This maxim applies chiefly to commerce; the art element is not considered. The recently organized C. P. Goerz American Optical Company does not seem to think so, for it issued in the middle of January a most superb price-list of their lenses and other optical specialties. Its appearance is at once imposing, eminently artistic and in good taste. The dimensions of this *de luxe* catalog are 8 x 12 inches. A gilt cover of rich design — the work of Eduard J. Steichen — encloses the contents-matter printed in large, clear type on heavy, coated paper. The book is embellished with twenty large half-tone reproductions of photographs illustrating the merits of the Dagor Lenses, Nos. 1 to 10, which have been put to severe tests in every department of photography. There are magnificent examples of portraiture, genre, architecture, landscape, copying, high speed, animal life and artificial light. The frontispiece is a finely executed photogravure from an excellent original by A. R. Dugmore, entitled "Bird-Life" — four young birds perched on a tree-branch. Like the other examples of good lens-work inserted in the catalog, this picture makes a strong appeal in favor of the Dagor Lens. The publication of a work on so magnificent a scale as the new Goerz catalog is obviously an expensive undertaking, and that copies will be distributed with careful discrimination is equally plain. Workers using the Goerz Lenses will, no doubt, be able to procure a copy on application to the firm at 32 Union Square, New York City. Other covetous persons — and there will be many — are advised to mail their request to the Goerz people, enclosing stamps to the amount of ten cents, for postage, and a copy of the Goerz General Catalog will be forthcoming.

THE ANTHONY AND SCOVILL CATALOG

THE Anthony and Scovill Company, Binghamton and New York, has just put out a photographic catalog, the general appearance of which is a credit to a firm for half a century identified prominently with the sale and manufacture of high-grade photographic apparatus and supplies, notably cameras and accessories of all kinds used by the professional photographer, the photo-engraver and the process-worker. The new Anthony-Scovill catalog shows to what great extent the firm produces this line of goods, and how largely it ministers also to the requirements of the amateur photographer, its Buster Brown, Ansco and Solograph Cameras, all of improved and attractive models, forming a strong feature of its business. While the firm lists conspicuously the newest types of Goerz Lenses, it devotes adequate space to the famous Dallmeyer Portrait-Lenses, for which the Anthonys always had the exclusive agency in the United States. As every live firm urges comparison of its products with those of other makers, we advise workers to acquaint themselves with the illuminating contents of Anthony and Scovill's latest catalog.

SHERBROOKE CAMERA CLUB

THIS club was organized at Sherbrooke, Quebec, last September, with the following officers: president, S. L. Hobson; vice-president, H. Irwin; secretary-treasurer, C. E. Whitcher; assistant secretary, W. W. Harries, B.A. The membership numbers about forty. The club has convenient and well-equipped quarters.

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*

THE SPEED OF N. C. FILM.

Talking with the dealers, as I do every day of the year, I find that their hardest work comes in trying to convince their customers that they will not be sacrificing speed by using films instead of plates. Now that Todd of the *Beacon* and the author of the well known exposure tables bearing his name has publicly announced the fact that he has found the Eastman film as rapid as the plates in fastest or O class, their work should be easier. This reminds me that I met his son, Eric, who is touring the Coast, and the conversation turning to his father and his work I was interested to learn of that hard-working Scotchman's thoroughness in the matter of securing data for the compilation of this new exposure card. Days were consumed in making exposures and plates used by the gross. While the son is interested in photography only to the extent of using a pocket Kodak for making memoranda of his travels, when the subject of photography is brought around to his father's work he convinces one that his modest description of the work involved in securing data acceptable to the author of the Photo-Beacon Exposure Card is no small undertaking. But to return to the matter of the Eastman film, I have always wondered why there was any question as to the speed. Some of the fastest plates I ever used and plates that were particularly pleasing for the reason that with their speed they had little of the faults inherent in most fast emulsions, were Eastman plates. If the firm can make such a satisfactory emulsion to be coated upon glass I cannot understand why they could not coat it upon celluloid film as well. It is evident that they have been doing this right along.—*The Demonstrator in Camera Craft.*

AS SIMPLE AS SOLIO.

Many amateurs have refrained from the use of platinum papers owing to the supposed difficulty of manipulation. It is true that some platinum papers afford but little latitude either in exposure or after-manipulation and require considerable experience in handling to secure uniform results. Angelo Platinum Black and White and Angelo Sepia Platinum are absolutely free from every objectionable feature. The Angelo Platinum papers print in daylight, and the correctly printed image is sufficiently visible to enable the absolute novice to quickly learn the proper printing depth.

In development, the image appears slowly and steadily, making it an easy matter to determine the proper development. Angelo Sepia Platinum is printed in the same manner as the Angelo Black and White, and unlike most Sepia papers, is developed in a cold bath, avoiding the necessity of maintaining the bath at a high temperature.

No smoky or bronzed shadows will be in evidence even when considerably over printed, and the exceedingly simple processes of printing and development make Angelo even simpler than Solio.

THE No. 2 BROWNIE DEVELOPING BOX.

For daylight development of No. 1 and No. 2 Brownie film cartridges. A simplification of the Kodak Tank Developer, made possible by the short length of the Brownie film. Easy to understand and operate. Perfect results.

Price, $1.00.

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*

TO MAKE PRINTS LIE FLAT.

Paste another piece of paper over the back of the mount. Curl prints over a ruler before mounting, mount by the corners or one edge only—don't mount 'em. All these and many more solutions of the mounting without curl problem have been offered and tried with greater or less success.

If you mount a print wet, you must expect more or less curl unless the mount be of sufficient thickness and weight to resist the "pull" of the print.

Mounting on a thin mount with paste means curl. There is but one process of mounting that is successful under all conditions, and that is dry mounting with heat to secure contact.

Kodak Dry Mounting Tissue is the perfect mountant. It does away with every objectionable feature of the other methods, permitting the mounting of prints of any size on the thinnest of mounts without curl. Just the pressure of a hot iron begins and completes the operation.

WORTH WHILE.

Some time during the year, almost every town in the country receives a visit from one of our Velox demonstrators. When your dealer advertises a public Velox demonstration and sends you an invitation to attend, it will be worth while to remember the date and be on hand; no matter if you are an expert, the demonstrator can show you a new idea or so—otherwise he would not be a Velox demonstrator.

If you are inexperienced, he will be more than willing to explain to you all the simple and beautiful possibilities of Velox, from exposure to redevelopment.

Help us to help you.

EXPERIMENT TIME.

Perhaps you are a one-grade man, have found a good thing and stick to it—a good idea at that—but at this time of year, pictorial probabilities do not present themselves with such frequency as in the summer time and the out of doors does not so much appeal to one. Here is your opportunity to do a little experimental work—there are always possibilities of doing a little, and often times a whole lot better.

Suppose, for instance, you have always used Velvet Velox. Undoubtedly some of your negatives would yield better results on Carbon or Rough Velox, then double printing and the re-development process afford many charming variations and permit the exercising of ones ingenuity in devising novel and striking effects.

The shut-in days also provide time for experiments in exposure. Have you ever tried making portraits with the Eastman Flash Sheets in combination with daylight? Often times a small portion of a flash sheet will illuminate a shadow to just the right degree, and as an assistant to the sun, will do really wonderful things.

Incidentally, the little Kodak Portrait Attachment, with its insignificant price, is another wonder worker, as it not only permits of making large sized head and shoulder pictures, but helps to eliminate by throwing out of focus the frequently obtrusive and distracting back ground.

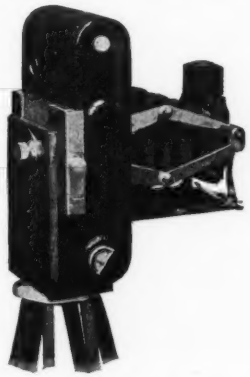
Then again, the making of Bromide enlargements is an exceedingly simple matter if you own a Pocket Kodak—almost as simple as snapping the film for the original negative.

To help you arrive at a successful conclusion, we offer you the "Velox Book," "Bromide Enlarging with a Kodak" and "Amateur Portraiture by Flashlight." They are yours for the asking. Should your dealer be out of them temporarily (they go pretty speedily) drop us a postal.

(2)

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*



THE FOLDING POCKET TRIPOD ADAPTER No. 1

For the No. 1 and No. 1A Folding Pocket Kodaks.

Holds the Kodak on the tripod in either vertical or horizontal position—reversible without detaching from tripod.

Price, 75c.

HOW YOU ARE VICTIMIZED BY THE SUBSTITUTION DEALER.

Literary Digest.

*** The substitution dealer depends upon selling you a counterfeit. A counterfeit is invariably inferior to the genuine. When you purchase an imitation, the dealer makes a larger percentage of profit. In return, you are defrauded. The claim of the substitutor, that the imitation not being advertised can be sold for less money, is humbug. The sham article has no reputation to uphold, no quality to maintain. Inferior quality means dearer cost to you. Extensively advertised articles, having immeasurably larger sales than the substitutes, can be offered at lower cost. * * *

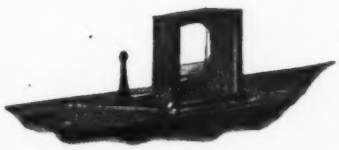
Outside the realm of honest competition almost every product with prestige has its imitators copying its name and appearance as closely as they dare. We ask you to "*get what you ask for.*" *Refuse bogus substitutes. Decline to accept the "same thing." Insist upon the genuine.* The best is the most economical. Purchase the trade-marked brands and you will get the most for your money.

CHEAP INSURANCE.

For our own protection we must manufacture developers, toning solutions and similar compounds exactly adapted to our various products and composed of absolutely pure chemicals.

To retain the good will of our customers each and every product bearing our trade-mark must be of the highest excellence and capable of yielding first-class results. We might manufacture film, plates and paper of the first quality—and yet have our efforts nullified if we did not protect the consumer by providing suitable chemical compounds to insure his obtaining the best results.

No other manufacturer can know our exact needs, few have our facilities and *none* can have the *same interest* in meeting such demands. Do not accept a substitute. Even if it be an honest one, it *cannot* equal the genuine. Insist upon having what you ask for. The genuine article will prove the cheapest possible premium for best results insurance.



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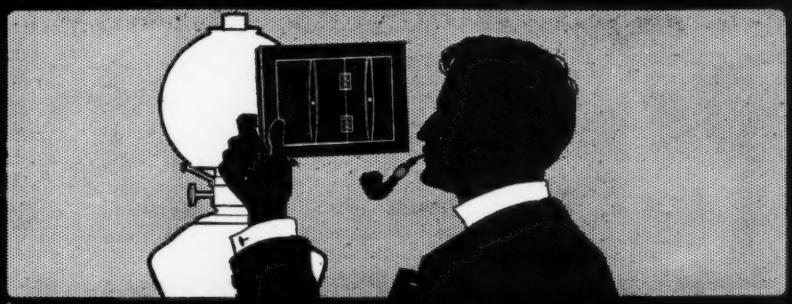
A special equipment for the 4A Folding Kodak, permitting the Kodak being held on a level with the eyes or placed on a tripod at an elevation which precludes the use of the regular finder on the camera front. Full directions for use and for attaching to Kodak accompany each finder.

Price, $3.00.



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